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# TABULATION OF LEGENDRE FUNCTIONS AND CONICAL FUNCTIONS

by

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MATERIALS ENGINEERING DIVISION

## U. S. ARMY MATERIALS RESEARCH AGENCY

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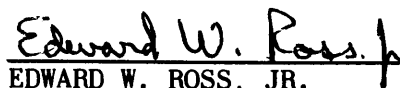
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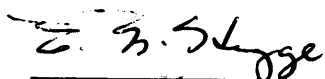
(i)   $P_\nu(\cos \theta)$, $Q_\nu(\cos \theta)$

(ii)  $P_{-\frac{1}{2}+ib}(\cos \theta)$, $\dfrac{dP_{-\frac{1}{2}+ib}(\cos \theta)}{d\theta}$

## ABSTRACT

This report presents tabulations of several different classes of Legendre functions. First, the functions $P_\nu (\cos \theta)$ and $Q_\nu (\cos \theta)$ for real, fractional $\nu$ and real $\theta$ are given in the range $-0.5 \leq \nu \leq 3.5$, $0 \leq \theta < 180°$ at intervals $\Delta\nu = 0.02$, $\Delta\theta = 2°$. The tabular values are given to six decimal places with a possible error of one in the sixth digit. Second, the conical functions, $P_{-\frac{1}{2}+ib} (\cos \theta)$, and their derivatives $dP_{-\frac{1}{2}+ib} (\cos \theta)/d\theta$ for real b and $\theta$ are given in the range $0 \leq b \leq 5$, $0 \leq \theta < 180°$ at the somewhat coarser mesh, $\Delta b = 0.1$, $\Delta\theta = 5°$. These tabular values are given only to five significant figures with a percentage absolute error that should not exceed one in the fifth figure.

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# I. INTRODUCTION

This report presents tabulations of several types of solution to Legendre's differential equation in the form

$$\frac{dw}{d\theta} + \cot \theta \frac{dw}{d\theta} + \nu(\nu + 1) w = 0$$

where $\nu(\nu + 1)$ is taken to be real and $\theta$ is real and satisfies $0 < \theta < \pi$. When $\nu$ is real, the usual Legendre functions of the first and second kinds, $P_\nu(\cos \theta)$ and $Q_\nu(\cos \theta)$, respectively, form a linearly independent pair of solutions to this equation and are tabulated herein. Further, $\nu(\nu + 1)$ is also real when $\nu$ is complex but of the special form $\nu = -\frac{1}{2} + ib$, where $b$ is real. In this case $P_\nu(\cos \theta)$ is still real (although $Q_\nu(\cos \theta)$ is not), and we shall present tables of $P_{-\frac{1}{2}+ib}(\cos \theta)$ too.

Compendia of the properties of these functions are given in the works of Hobson,[1] Erdelyi et al.,[2] and Magnus and Oberhettinger.[3] Most of the extant tables of these functions deal only with the case where $\nu$ is an integer, and the $P_\nu(\cos \theta)$ reduce to the Legendre polynomials. A few more general tables have been made, of which three are noteworthy. Gray[4] has given a short table of $P_\nu(x)$ for $0 \le \nu \le 2$ and $-1 < x \le 1$ which has several errors in it. The French Centre National D'Etudes des Telecommunications[5] has given a much more extensive tabulation of $P_\nu(\cos \theta)$, and Zhurina and Karamazina[6] have given a tabulation of $P_{-\frac{1}{2}+ib}(x)$ that is very dense in $b$ but rather sparse in $x$.

The next section contains a collection of the most important formulas relating to the Legendre functions, and the actual calculations are described in Section III. Section IV gives a brief discussion of the accuracy and checking of these results.

# II. BASIC FORMULAS RELATING TO LEGENDRE FUNCTIONS

The hypergeometric function $F(a,b;c;z)$ is defined by the infinite series

$$F(a,b;c;z) = \sum_{n=0}^{\infty} F_n(a,b;c;z) \tag{1}$$

where

$$F_0(a,b;c;z) = 1$$

$$F_n(a,b;c;z) = \frac{\Gamma(c)\Gamma(1)}{\Gamma(a)\Gamma(b)} \frac{\Gamma(a+n)\Gamma(b+n)}{\Gamma(c+n)\Gamma(1+n)} z^n, \quad n \ge 1. \tag{2}$$

The hypergeometric series, so defined, converges absolutely for $|z| < 1$. The coefficients $F_n$ may be computed recursively by the formulas

$$F/_nF_{n-1} = \frac{(a+n-1)(b+n-1)}{n(c+n-1)} z \tag{3}$$

$$= \left[ 1 + \frac{a+b-c-1}{n} + \frac{ab-c(a+b-c)}{b(c+n-1)} \right], \quad n \geq 1. \tag{4}$$

As $n \rightarrow \infty$

$$F_n \sim \frac{\Gamma(c)}{\Gamma(a)\Gamma(b)} z^n n^{a+b-c-1} \left[ 1 + 0\left(\frac{1}{n}\right) \right]. \tag{5}$$

The derivative of the hypergeometric function is seen to be

$$\frac{dF}{dz} = \frac{ab}{c} F(a+1, b+1; c+1; z) \tag{6}$$

and, if

$$\frac{dF}{dz} = \frac{ab}{c} \sum_{n=0}^{\infty} F'_n (a,b;c;z), \tag{7}$$

we have from (2) - (5)

$$F'_o = 1$$

$$F'_n/F'_{n-1} = \frac{(a+n)(b+n)}{n(c+n)} z = 1 + \frac{a+b-c}{n} + \frac{ab-c(a+b-c)}{n(c+n)}, \quad n \geq 1 \tag{8}$$

$$F'_n \sim \frac{\Gamma(c+1)}{\Gamma(a+1)\Gamma(b+1)} n^{a+b-c} z^n \text{ as } n \rightarrow \infty. \tag{9}$$

The Legendre functions $P_\nu(\cos \theta)$ and $Q_\nu(\cos \theta)$ can be defined in various ways in terms of the hypergeometric function, but for our purposes the following pair of definitions is adequate. If

$$U(\cos^2 \theta) = F\left( -\frac{1}{2}\nu, \frac{1}{2} + \frac{1}{2}\nu; \frac{1}{2}; \cos^2 \theta \right)$$

$$V(\cos^2 \theta) = F\left( \frac{1}{2} - \frac{1}{2}\nu, 1 + \frac{1}{2}\nu; \frac{3}{2}; \cos^2 \theta \right) \tag{10}$$

$$\phi(\nu) = \Gamma\left( \frac{1}{2} + \frac{1}{2}\nu \right) \Big/ \Gamma\left( 1 + \frac{1}{2}\nu \right), \tag{11}$$

then

$$P_\nu(\cos \theta) = \frac{1}{\sqrt{\pi}} \left[ \phi U \cos\left( \frac{\nu\pi}{2} \right) + \frac{2V \cos \theta}{\phi} \sin\left( \frac{\nu\pi}{2} \right) \right]$$

$$Q_\nu(\cos \theta) = \frac{\sqrt{\pi}}{2} \left[ -\phi U \sin\left( \frac{\nu\pi}{2} \right) + \frac{2V \cos \theta}{\phi} \cos\left( \frac{\nu\pi}{2} \right) \right]. \tag{12}$$

Further it is evident by substitution that*

$$P_\nu[\cos(\pi - \theta)] = P_\nu(\cos\theta)\cos\nu\pi - \frac{2}{\pi}Q_\nu(\cos\theta)\sin\nu\pi \qquad (13a)$$

$$Q_\nu[\cos(\pi - \theta)] = -Q_\nu(\cos\theta)\cos\nu\pi - \frac{\pi}{2}P_\nu(\cos\theta)\sin\nu\pi. \qquad (13b)$$

If $x = \cos\theta$, then (12) gives $P_\nu$ and $Q_\nu$ as power series about $x = 0$. Alternatively, we may set $z = \sin^2\frac{\theta}{2}$ and express $P_\nu$ and $Q_\nu$ as series in $z$ by means of the formulas

$$P_\nu(\cos\theta) = F(-\nu, \ \nu + 1; \ 1; \ z) = \sum_0^\infty C_n(\nu,z) \qquad (14)$$

where [see (2)]

$$C_n(\nu,z) = F_n(-\nu, \ \nu + 1; \ 1, \ z), \qquad (15)$$

and

$$Q_\nu(\cos\theta) = P_\nu(\cos\theta)\left[\frac{1}{2}\log\left(\frac{1-z}{z}\right) + \psi(o) - \psi(\nu)\right] + \sum_{n=o}^\infty C_n(\nu,z)[\psi(n) - \psi(o)]. \qquad (16)$$

In (16) $\psi(s)$ is the logarithmic derivative of the factorial function

$$\psi(s) = \frac{1}{s!}\frac{d}{ds}(s!) = \frac{d}{ds}(\log s!);$$

its most important properties are listed a little later in this section.

Representations of $P_\nu[\cos(\pi - \theta)]$ and $Q_\nu[\cos(\pi - \theta]$ can be derived by combining (14) and (13). We list only $P_\nu[\cos(\pi - \theta]$ explicitly

$$P_\nu[\cos(\pi-\theta)] = \frac{\sin\nu\pi}{\pi}\left\{P_\nu(\cos\theta)\log z + \sum_{n=o}^\infty C_n(\nu,z)[\psi(n+\nu) + \psi(n-\nu-1)-2\psi(n)]\right\}. \qquad (17)$$

Formulas (12) give representations of $P_\nu(\cos\theta)$ and $Q_\nu(\cos\theta)$ as series that converge rapidly near $\theta = \pi/2$ but diverge for $\theta = 0,\pi$. Equations (14) - (16) give $P_\nu(\cos\theta)$ and $Q_\nu(\cos\theta)$ as series that converge for $0 \leq \theta < \pi$ but converge rapidly only near $\theta = 0$. If we set $\sigma = \pi - \theta$, then (17) gives a representation of $P_\nu(\cos\sigma)$ as a series that converges for $0 \leq \sigma < \pi$ but again converges rapidly only near $\theta = 0$, i.e., near $\sigma = \pi$. Also, by combining (13) with (14) - (16), a series representation of $Q_\nu(\cos\sigma)$ is found that converges for $0 \leq \sigma < \pi$ but converges rapidly only near $\theta = 0$ or $\sigma = \pi$.

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*References 1, 2, and 3 all contain inconsistencies in sign between the formulas (12) and (13).*

Several other elementary properties of the Legendre functions are listed below

$$P_{\nu+2}(\cos\ \theta) = \left(\frac{2\nu+3}{\nu+2}\right)\cos\ \theta\ P_{\nu+1}(\cos\ \theta)\ - \left(\frac{\nu+1}{\nu+2}\right)P_\nu(\cos\ \theta) \qquad (18)$$

$$\frac{dP_\nu(\cos\ \theta)}{d\theta} = \frac{\nu}{\sin\ \theta}\ [\cos\ \theta\ P_\nu(\cos\ \theta)\ -\ P_{\nu-1}(\cos\ \theta)] \qquad (19)$$

$$P_{-\nu-1}(\cos\ \theta) = P_\nu(\cos\ \theta) \qquad (20)$$

Formulas (18) and (19) remain true if P is replaced by Q throughout, but this is not true of (20).

Asymptotic representation of $P_\nu(\cos\ \theta)$ and $Q_\nu(\cos\ \theta)$ that are valid as $|\nu| \to \infty$ except near $\theta = 0$ and $\pi$ can be found from the expansions

$$P_\nu(\cos\ \theta) = \sqrt{\frac{2}{\pi\sin\ \theta}}\ \frac{\Gamma(1+\nu)}{\Gamma(\frac{3}{2}+\nu)}\ \sum_{n=0}^{\infty}\ \frac{(-1)^n}{n!}\left[\frac{\Gamma(\frac{1}{2}+n)}{\Gamma(\frac{1}{2})}\right]^2\ \frac{\sin\left[\left(n+\nu+\frac{1}{2}\right)\theta+\frac{\pi}{4}+\frac{n\pi}{2}\right]}{(2\sin\ \theta)^n\left[\frac{\Gamma(\nu+\frac{3}{2}+n)}{\Gamma(\nu+\frac{3}{2})}\right]} \qquad (21)$$

$$Q_\nu(\cos\ \theta) = \sqrt{\frac{\pi}{2\sin\ \theta}}\ \frac{\Gamma(1+\nu)}{\Gamma(\frac{3}{2}+\nu)}\ \sum_{n=0}^{\infty}\ \frac{(-1)^n}{n!}\left[\frac{\Gamma(\frac{1}{2}+n)}{\Gamma(\frac{1}{2})}\right]^2\ \frac{\cos\left[\left(n+\nu+\frac{1}{2}\right)\theta+\frac{\pi}{4}+\frac{n\pi}{2}\right]}{(2\sin\ \theta)^n\left[\frac{\Gamma(\nu+\frac{3}{2}+n)}{\Gamma(\frac{3}{2}+\nu)}\right]} \qquad (22)$$

These expansions are convergent for $\pi/6 < \theta < 5\pi/6$ and asymptotic elsewhere. When $\nu = -\frac{1}{2} + ib$, the expansion (21) can be rewritten in terms of real quantities as

$$P_{-\frac{1}{2}+ib}(\cos\ \theta) = \frac{e^{b\theta}}{\sqrt{2\pi b\sin\ \theta}}\ \sum_{n=0}^{\infty}\ \frac{\Gamma(n+\frac{1}{2})}{\Gamma(\frac{1}{2})}A_n(\theta)b^{-n}, \qquad (23)$$

where the $A_n(\theta)$ are defined by

$$\{\epsilon^{-1}[\sin\ \epsilon-(1\ -\ \cos\ \epsilon)\ \cot\ \theta]\}^{-1/2} = \sum_{n=0}^{\infty}\ A_n(\theta)\epsilon^n. \qquad (24)$$

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The first five functions $A_n(\theta)$, are

$$A_o = 1 \qquad\qquad\qquad A_1 = \frac{1}{4} \cot \theta$$

$$A_2 = \frac{1}{12} + \frac{3}{32} \cot^2 \theta \qquad\qquad A_3 = \left(\frac{1}{24} + \frac{5}{128} \cot^2 \theta\right)\cot \theta$$

$$A_4 = \frac{1}{160} + \frac{3}{128} \cot^2 \theta + \frac{35}{2048} \cot^4 \theta$$

As $\theta \to 0$ we have

$$P_\nu(\cos \theta) \sim J_o\left[\left(\lambda + \frac{1}{2}\right) 2 \sin (\theta/2)\right] \qquad (25)$$

$$Q_\nu(\cos \theta) = -\frac{\pi}{2} Y_o\left[\left(\lambda + \frac{1}{2}\right) 2 \sin (\theta/2)\right]. \qquad (26)$$

The function $\Gamma(s)$ is very well known, but we shall list its most important properties here.

$$\Gamma(s) = \frac{1}{s} \sum_{n=1}^{\infty} \left[\frac{\left(1+\frac{1}{n}\right)^s}{\left(1+\frac{s}{n}\right)}\right] \qquad (27)$$

$$\Gamma(1) = 1 \qquad (28)$$

$$\Gamma(n + 1) = n! \qquad (29)$$

$$\Gamma(1 + s) = s \Gamma(s) \qquad (30)$$

$$\Gamma(s) \Gamma(1 - s) = \frac{\pi}{\sin \pi s} \qquad (31)$$

$$\Gamma\left(\frac{1}{2}\right) = \sqrt{\pi} \qquad (32)$$

$$\Gamma\left(\frac{1}{2} + s\right) \Gamma\left(\frac{1}{2} - s\right) = \frac{\pi}{\cos \pi s} \qquad (33)$$

As $s \to \infty$,

$$\log \Gamma(s) \sim \left(s - \frac{1}{2}\right) \log s - s + \log \sqrt{2\pi} +$$

$$\frac{1}{12s} - \frac{1}{360s^3} + \frac{1}{1260s^5} - \frac{1}{1680s^7} \cdots \qquad (34)$$

The asymptotic representation (34) is valid as long as $\left|\arg s\right| < \pi$.

The function $\psi(s)$ has several important properties which are given below:

$$\psi(o) = -\gamma \qquad (35)$$

where

$$\gamma = \text{Euler's constant} = \lim_{n \to \infty} \left[ \sum_{p=1}^{n} \frac{1}{p} - \ln n \right] = 0.577215665$$

$$\psi(s) - \psi(o) = s \sum_{n=1}^{\infty} \frac{1}{n(s+n)} \qquad (36)$$

$$\psi(s) = \psi(s - 1) + \frac{1}{s} \qquad (37)$$

$$\psi(s + n) = \psi(s) + \sum_{p=1}^{n} \frac{1}{s+p} \qquad (38)$$

$$\psi(-s) = \psi(s - 1) + \pi \cot \pi s. \qquad (39)$$

As $s \to \infty$,

$$\psi(s) \sim \ln s + \frac{1}{2s} - \frac{1}{12s^2} + \frac{1}{120s^4} - \frac{1}{252s^6} + \frac{1}{240s^8} - \cdots \qquad (40)$$

Once again, the asymptotic representation (40) for $\psi(s)$ is valid provided $|\text{arg } s| < \pi$.

All the definitions and relations given in this section can be found in Erdelyi[2] except that Erdelyi takes $\psi(s)$ as the logarithmic derivative of the gamma function rather than the factorial function as here.

## III. CONSTRUCTION OF THE TABLES

The following considerations played a part in choosing the format of the tables. First, if $\nu$ is real, values of $dP_{\nu}$ $(\cos \theta)/d\theta$ and $dQ_{\nu}$ $(\cos \theta)/d\theta$ can be found from tables of $P_{\nu}$ $(\cos \theta)$ and $Q_{\nu}$ $(\cos \theta)$ themselves by use of (19). However, when $\nu = -\frac{1}{2} + ib$, (19) shows that we cannot get values of $dP_{-\frac{1}{2}+ib}$ $(\cos \theta)/d\theta$ from tables of $P_{-\frac{1}{2}+ib}$ $(\cos \theta)$; we must either also tabulate $P_{-3/2+ib}$ $(\cos \theta)$ or tabulate $dP_{-\frac{1}{2}+ib}$ $(\cos \theta)/d\theta$ itself. It is easier to do the latter, and so we have prepared tables of both $P_{-\frac{1}{2}+ib}$ $(\cos \theta)$ and $dP_{-\frac{1}{2}+ib}(\cos \theta)/d\theta$. Second, for real $\nu$, $P_{\nu}(\cos \theta)$ and $Q_{\nu}(\cos \theta)$ are basically oscillatory in nature and lie mainly between -1 and 1, and so it is most useful to give their tabular values to a fixed number of decimal places and make a statement about the absolute error. When $\nu = -\frac{1}{2} + ib$, however, $P_{\nu}(\cos \theta)$ has exponential behavior and changes rapidly in magnitude; in this case the most practical arrangement is a tabulation in exponential form, together with a statement about the relative error.

The choice of $\nu$- and $\theta$-values at which the functions were to be evaluated was motivated mainly by the desire to provide a rather close

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tabulation for moderate values of $|\nu|$ over the range $(0,\pi)$ in $\theta$. This led to the choices

$$\nu = -0.5 \ (0.02) \ 3.5$$

$$\theta = 0 \ (2°) \ 180°$$

for the tables of $P_\nu(\cos\theta)$ and $Q_\nu(\cos\theta)$ when $\nu$ is real. With these tables, two applications of (18) give values out to $\nu = 5.5$, and beyond that point the asymptotic formulas (21) and (22) become useful.

The functions $P_{-\frac{1}{2}+ib}(\cos\theta)$ are less often needed, so a somewhat sparser tabulation than that for real $\nu$ seemed acceptable. However, since (18) cannot be used to obtain values for large b from the tabulated values, it appeared necessary to extend the tabulation out to the range of b-values where the asymptotic formula (23) becomes applicable. For these reasons the choices

$$b = 0 \ (0.1) \ 5.0$$

$$\theta = 0 \ (5°) \ 175°$$

were made for both $P_{-\frac{1}{2}+ib}(\cos\theta)$ and its derivative.

For real $\nu$ the calculations were made by summing series (14) and (16) for $0 < \theta \le 90°$, $-\frac{1}{2} \le \nu \le \frac{3}{2}$, and then using (13) and (18) to extend the values to $90° \le \theta < 180°$, $\frac{3}{2} \le \nu \le \frac{7}{2}$. The calculations of $P_\nu(\cos\theta)$ and $Q_\nu(\cos\theta)$ were made simultaneously to avoid needless recalculation of some quantities that occur in both (14) and (16).

The calculations of

$$P(b,\theta) \equiv P_{-\frac{1}{2}+ib}(\cos\theta),$$

and $\partial P(b,\theta)/d\theta$ were more difficult to carry out satisfactorily. When the formulas (14) and (17) were used for the ranges $0 \le \theta \le 90°$ and $0 \le 180° - \theta \le 90°$, respectively, the terms within the brackets in (17) almost cancelled each other, resulting in excessive loss of accuracy. For this reason the final calculations of $P(b,\theta)$ were made by using (14) for $0 \le \theta \le 90°$, (12a) for $90° \le \theta \le 150°$ and (17) for $150° \le \theta \le 175°$. In these ranges $\partial P(b,\theta)/\partial\theta$ was calculated by formulas obtained from (14), (12a) and (17) by differentiation.

The calculation of the $\psi$-function was always done by shifting the argument up to fairly large values [via (38)] and then using (40).

## IV. DISCUSSION OF ACCURACY

The accuracy of the calculations was ultimately limited by the fact that the calculations were done with the Fortran I Processor on an IBM 1620 computer. In this system, floating point calculations are carried out with

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eight significant digits, and so the relative error in the final result of many such calculations is likely to be much larger than $1 \times 10^{-8}$. Apart from this it is difficult to make precise statements about the accuracy of these calculations, but in the following paragraphs we shall make what seem to be reasonable statements about the errors.

First, in the calculations of $P_\nu(\cos \theta)$, $Q_\nu(\cos \theta)$, there is evidence (detailed below) that the absolute errors in the sixth decimal places of the tabular entries do not exceed one. An internal check is provided by the fact that the results at $\theta = 90°$ were calculated and printed in two different ways, i.e., using (14) and (13a) for $P_\nu$ and (16) and (13b) for $Q_\nu$. Comparing the two tabular entries for each $\nu$-value at $\theta = 90°$, we see that they differ by no more than one unit in the sixth decimal place in all cases. A further internal check is given by the fact that the results for $\nu = 1.5$ were also calculated and printed in two different ways, e.g., for $P_\nu$, once using (14) and (13a) to find the values directly and then again using (18) in conjunction with the values for $\nu = -0.5$ and $\nu = +0.5$. If we compare the two entries for each $\theta$-value at $\nu = 1.5$, we see that they too differ by one unit or less in the sixth decimal place in all cases. These two internal checks are inconclusive since the two entries being compared could have equal errors, but they are indicative of the level of accuracy.

One obtains an external check on the results by comparing the entries for $P_\nu(\cos \theta)$ with those of the sparser table given by Gray. In most cases the greatest disagreement is one in the sixth decimal place. However, in a number of cases the discrepancy is worse, up to $10^{-2}$ in a few entries. Each of these discrepancies was checked separately, either by differencing or by running the calculation on a different computer with greater accuracy. In every case the present results were verified, and wherever the calculations were run with greater accuracy, the results agreed with the present entries apart from a difference of one unit in the sixth decimal place.

It is still more difficult to make precise statements about the accuracy of the calculations when $\nu = -\frac{1}{2} + ib$ since no other tables of $P(b, \theta)$ were available for comparison. The only internal check consisted of comparing the two entries at each b-value for $\theta = 150°$, one of which was computed by (17) and the other by (12a). These all agree apart from a difference of one unit in the fifth digit, this being true for both $P(b, \theta)$ and $dP(b, \theta)/d\theta$. For b sufficiently large and $\theta$ near enough to 90°, the expansion (23) also verified a few points apart from a difference of one unit in the fifth digit.

To summarize, we claim that in the tables for $P_\nu(\cos \theta)$ and $Q_\nu(\cos \theta)$ the error in the sixth decimal place is less than two units and in the tables for $P_{-\frac{1}{2}+ib}(\cos \theta)$ and $dP_{-\frac{1}{2}+ib}(\cos \theta)$ the error in the fifth digit is less than two units.

## ACKNOWLEDGMENT

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# TABLE I

Table of $P_{\nu}(\cos \theta)$:  Six Decimal Places

$$\theta = 0 \ (2°) \ 178°$$

$$\nu = -0.5 \ (0.02) \ 3.5$$

$$P_\nu(\cos \theta)$$

| $\nu$ | -.50 | -.48 | -.46 | -.44 | -.42 | -.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | 1.000076 | 1.000076 | 1.000075 | 1.000075 | 1.000074 | 1.000073 |
| 4 | 1.000304 | 1.000304 | 1.000302 | 1.000300 | 1.000296 | 1.000292 |
| 6 | 1.000685 | 1.000684 | 1.000681 | 1.000675 | 1.000668 | 1.000658 |
| 8 | 1.001219 | 1.001217 | 1.001212 | 1.001202 | 1.001188 | 1.001170 |
| 10 | 1.001907 | 1.001903 | 1.001894 | 1.001879 | 1.001858 | 1.001830 |
| 12 | 1.002748 | 1.002743 | 1.002730 | 1.002708 | 1.002678 | 1.002638 |
| 14 | 1.003744 | 1.003738 | 1.003720 | 1.003690 | 1.003648 | 1.003594 |
| 16 | 1.004895 | 1.004887 | 1.004864 | 1.004825 | 1.004770 | 1.004699 |
| 18 | 1.006203 | 1.006193 | 1.006163 | 1.006114 | 1.006044 | 1.005954 |
| 20 | 1.007668 | 1.007656 | 1.007619 | 1.007558 | 1.007472 | 1.007361 |
| 22 | 1.009293 | 1.009278 | 1.009233 | 1.009159 | 1.009054 | 1.008920 |
| 24 | 1.011077 | 1.011059 | 1.011006 | 1.010917 | 1.010793 | 1.010633 |
| 26 | 1.013023 | 1.013002 | 1.012940 | 1.012835 | 1.012689 | 1.012501 |
| 28 | 1.015133 | 1.015109 | 1.015036 | 1.014914 | 1.014744 | 1.014525 |
| 30 | 1.017408 | 1.017380 | 1.017296 | 1.017156 | 1.016961 | 1.016709 |
| 32 | 1.019850 | 1.019818 | 1.019723 | 1.019563 | 1.019340 | 1.019053 |
| 34 | 1.022462 | 1.022426 | 1.022318 | 1.022137 | 1.021884 | 1.021559 |
| 36 | 1.025246 | 1.025206 | 1.025084 | 1.024881 | 1.024596 | 1.024230 |
| 38 | 1.028204 | 1.028159 | 1.028023 | 1.027795 | 1.027477 | 1.027069 |
| 40 | 1.031340 | 1.031289 | 1.031138 | 1.030885 | 1.030531 | 1.030077 |
| 42 | 1.034655 | 1.034599 | 1.034431 | 1.034152 | 1.033761 | 1.033258 |
| 44 | 1.038153 | 1.038092 | 1.037907 | 1.037599 | 1.037168 | 1.036614 |
| 46 | 1.041839 | 1.041771 | 1.041568 | 1.041230 | 1.040757 | 1.040149 |
| 48 | 1.045714 | 1.045639 | 1.045418 | 1.045048 | 1.044531 | 1.043865 |
| 50 | 1.049782 | 1.049701 | 1.049460 | 1.049057 | 1.048493 | 1.047768 |
| 52 | 1.054049 | 1.053961 | 1.053698 | 1.053260 | 1.052647 | 1.051860 |
| 54 | 1.058517 | 1.058422 | 1.058137 | 1.057663 | 1.056998 | 1.056145 |
| 56 | 1.063192 | 1.063090 | 1.062781 | 1.062268 | 1.061550 | 1.060628 |
| 58 | 1.068078 | 1.067967 | 1.067636 | 1.067082 | 1.066308 | 1.065313 |
| 60 | 1.073181 | 1.073062 | 1.072705 | 1.072109 | 1.071276 | 1.070205 |
| 62 | 1.078506 | 1.078378 | 1.077994 | 1.077354 | 1.076460 | 1.075310 |
| 64 | 1.084058 | 1.083921 | 1.083509 | 1.082824 | 1.081865 | 1.080632 |
| 66 | 1.089844 | 1.089697 | 1.089257 | 1.088524 | 1.087497 | 1.086178 |
| 68 | 1.095870 | 1.095714 | 1.095243 | 1.094459 | 1.093362 | 1.091953 |
| 70 | 1.102144 | 1.101977 | 1.101475 | 1.100639 | 1.099469 | 1.097965 |
| 72 | 1.108672 | 1.108493 | 1.107959 | 1.107068 | 1.105822 | 1.104220 |
| 74 | 1.115462 | 1.115272 | 1.114703 | 1.113756 | 1.112429 | 1.110726 |
| 76 | 1.122523 | 1.122321 | 1.121716 | 1.120709 | 1.119300 | 1.117489 |
| 78 | 1.129862 | 1.129649 | 1.129007 | 1.127938 | 1.126442 | 1.124520 |
| 80 | 1.137491 | 1.137264 | 1.136584 | 1.135451 | 1.133864 | 1.131827 |
| 82 | 1.145419 | 1.145179 | 1.144458 | 1.143257 | 1.141577 | 1.139419 |
| 84 | 1.153655 | 1.153401 | 1.152638 | 1.151368 | 1.149590 | 1.147306 |
| 86 | 1.162213 | 1.161944 | 1.161137 | 1.159794 | 1.157914 | 1.155499 |
| 88 | 1.171103 | 1.170819 | 1.169967 | 1.168547 | 1.166561 | 1.164009 |
| 90 | 1.180339 | 1.180039 | 1.179139 | 1.177640 | 1.175544 | 1.172850 |

14

| $\nu$ | −.50 | −.48 | −.46 | −.44 | −.42 | −.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.180339 | 1.180039 | 1.179139 | 1.177640 | 1.175543 | 1.172850 |
| 92 | 1.189935 | 1.189618 | 1.188669 | 1.187087 | 1.184875 | 1.182034 |
| 94 | 1.199905 | 1.199571 | 1.198570 | 1.196903 | 1.194570 | 1.191575 |
| 96 | 1.210266 | 1.209914 | 1.208859 | 1.207102 | 1.204644 | 1.201488 |
| 98 | 1.221034 | 1.220663 | 1.219552 | 1.217702 | 1.215114 | 1.211790 |
| 100 | 1.232228 | 1.231838 | 1.230668 | 1.228720 | 1.225996 | 1.222497 |
| 102 | 1.243867 | 1.243457 | 1.242227 | 1.240177 | 1.237311 | 1.233630 |
| 104 | 1.255975 | 1.255543 | 1.254249 | 1.252093 | 1.249079 | 1.245207 |
| 106 | 1.268572 | 1.268118 | 1.266757 | 1.264491 | 1.261321 | 1.257252 |
| 108 | 1.281684 | 1.281207 | 1.279777 | 1.277395 | 1.274064 | 1.269788 |
| 110 | 1.295339 | 1.294837 | 1.293335 | 1.290832 | 1.287333 | 1.282840 |
| 112 | 1.309565 | 1.309039 | 1.307460 | 1.304831 | 1.301155 | 1.296436 |
| 114 | 1.324396 | 1.323843 | 1.322185 | 1.319424 | 1.315563 | 1.310608 |
| 116 | 1.339865 | 1.339285 | 1.337544 | 1.334645 | 1.330591 | 1.325388 |
| 118 | 1.356012 | 1.355403 | 1.353575 | 1.350531 | 1.346276 | 1.340813 |
| 120 | 1.372879 | 1.372239 | 1.370320 | 1.367125 | 1.362657 | 1.356923 |
| 122 | 1.390512 | 1.389840 | 1.387825 | 1.384471 | 1.379781 | 1.373762 |
| 124 | 1.408962 | 1.408257 | 1.406142 | 1.402620 | 1.397697 | 1.391379 |
| 126 | 1.428287 | 1.427546 | 1.425325 | 1.421628 | 1.416460 | 1.409828 |
| 128 | 1.448549 | 1.447771 | 1.445439 | 1.441557 | 1.436131 | 1.429168 |
| 130 | 1.469818 | 1.469001 | 1.466553 | 1.462476 | 1.456778 | 1.449467 |
| 132 | 1.492175 | 1.491317 | 1.488745 | 1.484463 | 1.478478 | 1.470800 |
| 134 | 1.515708 | 1.514807 | 1.512104 | 1.507605 | 1.501318 | 1.493252 |
| 136 | 1.540518 | 1.539570 | 1.536730 | 1.532002 | 1.525394 | 1.516918 |
| 138 | 1.566720 | 1.565724 | 1.562737 | 1.557766 | 1.550819 | 1.541908 |
| 140 | 1.594445 | 1.593397 | 1.590256 | 1.585026 | 1.577718 | 1.568346 |
| 142 | 1.623845 | 1.622742 | 1.619435 | 1.613931 | 1.606240 | 1.596377 |
| 144 | 1.655096 | 1.653934 | 1.650451 | 1.644654 | 1.636554 | 1.626167 |
| 146 | 1.688402 | 1.687178 | 1.683507 | 1.677396 | 1.668859 | 1.657913 |
| 148 | 1.724008 | 1.722716 | 1.718843 | 1.712397 | 1.703391 | 1.691844 |
| 150 | 1.762203 | 1.760838 | 1.756747 | 1.749939 | 1.740429 | 1.728235 |
| 152 | 1.803334 | 1.801891 | 1.797566 | 1.790367 | 1.780311 | 1.767420 |
| 154 | 1.847829 | 1.846301 | 1.841720 | 1.834097 | 1.823449 | 1.809801 |
| 156 | 1.896215 | 1.894594 | 1.889735 | 1.881649 | 1.870356 | 1.855882 |
| 158 | 1.949156 | 1.947433 | 1.942269 | 1.933676 | 1.921674 | 1.906293 |
| 160 | 2.007506 | 2.005671 | 2.000169 | 1.991014 | 1.978229 | 1.961846 |
| 162 | 2.072389 | 2.070428 | 2.064550 | 2.054769 | 2.041111 | 2.023610 |
| 164 | 2.145324 | 2.143221 | 2.136918 | 2.126431 | 2.111789 | 2.093029 |
| 166 | 2.228437 | 2.226173 | 2.219385 | 2.208092 | 2.192325 | 2.172126 |
| 168 | 2.324843 | 2.322390 | 2.315038 | 2.302808 | 2.285733 | 2.263860 |
| 170 | 2.439362 | 2.436685 | 2.428661 | 2.415314 | 2.396682 | 2.372818 |
| 172 | 2.580065 | 2.577112 | 2.568262 | 2.553539 | 2.532990 | 2.506673 |
| 174 | 2.762072 | 2.758761 | 2.748839 | 2.732335 | 2.709301 | 2.679806 |
| 176 | 3.019307 | 3.015490 | 3.004050 | 2.985024 | 2.958471 | 2.924477 |
| 178 | 3.459970 | 3.455284 | 3.441241 | 3.417889 | 3.385303 | 3.343592 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$P_\nu(\cos\theta)$$

| $\nu$ | -.40 | -.38 | -.36 | -.34 | -.32 | -.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | 1.000073 | 1.000071 | 1.000070 | 1.000068 | 1.000066 | 1.000063 |
| 4 | 1.000292 | 1.000287 | 1.000280 | 1.000273 | 1.000265 | 1.000255 |
| 6 | 1.000658 | 1.000646 | 1.000631 | 1.000615 | 1.000596 | 1.000576 |
| 8 | 1.001170 | 1.001149 | 1.001124 | 1.001094 | 1.001061 | 1.001024 |
| 10 | 1.001830 | 1.001797 | 1.001757 | 1.001711 | 1.001659 | 1.001601 |
| 12 | 1.002638 | 1.002590 | 1.002532 | 1.002466 | 1.002392 | 1.002308 |
| 14 | 1.003594 | 1.003528 | 1.003450 | 1.003360 | 1.003258 | 1.003144 |
| 16 | 1.004699 | 1.004613 | 1.004511 | 1.004393 | 1.004260 | 1.004111 |
| 18 | 1.005954 | 1.005845 | 1.005716 | 1.005567 | 1.005398 | 1.005209 |
| 20 | 1.007361 | 1.007226 | 1.007066 | 1.006882 | 1.006673 | 1.006439 |
| 22 | 1.008920 | 1.008756 | 1.008562 | 1.008339 | 1.008086 | 1.007803 |
| 24 | 1.010633 | 1.010437 | 1.010206 | 1.009940 | 1.009638 | 1.009301 |
| 26 | 1.012501 | 1.012271 | 1.011999 | 1.011686 | 1.011331 | 1.010934 |
| 28 | 1.014525 | 1.014258 | 1.013942 | 1.013578 | 1.013165 | 1.012704 |
| | | | | | | |
| 30 | 1.016709 | 1.016401 | 1.016038 | 1.015619 | 1.015143 | 1.014613 |
| 32 | 1.019053 | 1.018702 | 1.018287 | 1.017809 | 1.017267 | 1.016661 |
| 34 | 1.021559 | 1.021162 | 1.020692 | 1.020151 | 1.019537 | 1.018852 |
| 36 | 1.024230 | 1.023784 | 1.023256 | 1.022647 | 1.021957 | 1.021186 |
| 38 | 1.027069 | 1.026569 | 1.025979 | 1.025298 | 1.024527 | 1.023665 |
| 40 | 1.030077 | 1.029522 | 1.028865 | 1.028108 | 1.027251 | 1.026293 |
| 42 | 1.033258 | 1.032643 | 1.031917 | 1.031080 | 1.030131 | 1.029071 |
| 44 | 1.036614 | 1.035937 | 1.035137 | 1.034214 | 1.033169 | 1.032001 |
| 46 | 1.040149 | 1.039406 | 1.038528 | 1.037515 | 1.036368 | 1.035087 |
| 48 | 1.043865 | 1.043053 | 1.042093 | 1.040986 | 1.039732 | 1.038331 |
| 50 | 1.047768 | 1.046882 | 1.045836 | 1.044629 | 1.043263 | 1.041737 |
| 52 | 1.051860 | 1.050897 | 1.049760 | 1.048449 | 1.046964 | 1.045306 |
| 54 | 1.056145 | 1.055102 | 1.053870 | 1.052449 | 1.050841 | 1.049044 |
| 56 | 1.060628 | 1.059500 | 1.058169 | 1.056633 | 1.054895 | 1.052953 |
| 58 | 1.065313 | 1.064097 | 1.062661 | 1.061006 | 1.059131 | 1.057037 |
| | | | | | | |
| 60 | 1.070205 | 1.068897 | 1.067352 | 1.065570 | 1.063553 | 1.061301 |
| 62 | 1.075310 | 1.073905 | 1.072245 | 1.070333 | 1.068167 | 1.065749 |
| 64 | 1.080632 | 1.079126 | 1.077348 | 1.075298 | 1.072976 | 1.070385 |
| 66 | 1.086178 | 1.084566 | 1.082663 | 1.080470 | 1.077987 | 1.075215 |
| 68 | 1.091953 | 1.090232 | 1.088199 | 1.085856 | 1.083203 | 1.080243 |
| 70 | 1.097965 | 1.096129 | 1.093961 | 1.091461 | 1.088633 | 1.085475 |
| 72 | 1.104220 | 1.102264 | 1.099954 | 1.097292 | 1.094280 | 1.090917 |
| 74 | 1.110726 | 1.108645 | 1.106188 | 1.103356 | 1.100152 | 1.096575 |
| 76 | 1.117489 | 1.115278 | 1.112668 | 1.109660 | 1.106256 | 1.102457 |
| 78 | 1.124520 | 1.122174 | 1.119403 | 1.116211 | 1.112599 | 1.108568 |
| 80 | 1.131827 | 1.129339 | 1.126402 | 1.123018 | 1.119189 | 1.114917 |
| 82 | 1.139419 | 1.136783 | 1.133673 | 1.130089 | 1.126034 | 1.121511 |
| 84 | 1.147306 | 1.144517 | 1.141226 | 1.137434 | 1.133145 | 1.128359 |
| 86 | 1.155499 | 1.152551 | 1.149071 | 1.145063 | 1.140528 | 1.135471 |
| 88 | 1.164009 | 1.160895 | 1.157219 | 1.152986 | 1.148197 | 1.142855 |
| | | | | | | |
| 90 | 1.172850 | 1.169562 | 1.165683 | 1.161214 | 1.156159 | 1.150523 |

16

$$P_\nu(\cos \theta)$$

| $\nu$ | -.40 | -.38 | -.36 | -.34 | -.32 | -.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.172850 | 1.169562 | 1.165683 | 1.161214 | 1.156159 | 1.150523 |
| 92 | 1.182034 | 1.178566 | 1.174473 | 1.169760 | 1.164429 | 1.158485 |
| 94 | 1.191575 | 1.187918 | 1.183604 | 1.178636 | 1.173017 | 1.166754 |
| 96 | 1.201488 | 1.197636 | 1.193091 | 1.187857 | 1.181939 | 1.175341 |
| 98 | 1.211790 | 1.207733 | 1.202947 | 1.197437 | 1.191207 | 1.184262 |
| 100 | 1.222497 | 1.218228 | 1.213191 | 1.207393 | 1.200837 | 1.193530 |
| 102 | 1.233630 | 1.229138 | 1.223840 | 1.217741 | 1.210846 | 1.203163 |
| 104 | 1.245207 | 1.240484 | 1.234913 | 1.228501 | 1.221252 | 1.213176 |
| 106 | 1.257252 | 1.252287 | 1.246432 | 1.239692 | 1.232075 | 1.223588 |
| 108 | 1.269788 | 1.264570 | 1.258418 | 1.251336 | 1.243334 | 1.234420 |
| 110 | 1.282840 | 1.277359 | 1.270896 | 1.263458 | 1.255054 | 1.245693 |
| 112 | 1.296436 | 1.290680 | 1.283892 | 1.276082 | 1.267258 | 1.257431 |
| 114 | 1.310608 | 1.304564 | 1.297437 | 1.289238 | 1.279975 | 1.269660 |
| 116 | 1.325388 | 1.319042 | 1.311561 | 1.302955 | 1.293233 | 1.282409 |
| 118 | 1.340813 | 1.334152 | 1.326299 | 1.317266 | 1.307064 | 1.295707 |
| 120 | 1.356923 | 1.349931 | 1.341689 | 1.332210 | 1.321505 | 1.309589 |
| 122 | 1.373762 | 1.366423 | 1.357773 | 1.347826 | 1.336594 | 1.324093 |
| 124 | 1.391379 | 1.383676 | 1.374598 | 1.364159 | 1.352374 | 1.339259 |
| 126 | 1.409828 | 1.401742 | 1.392214 | 1.381259 | 1.368893 | 1.355133 |
| 128 | 1.429168 | 1.420680 | 1.410679 | 1.399181 | 1.386204 | 1.371767 |
| 130 | 1.449467 | 1.440555 | 1.430056 | 1.417987 | 1.404367 | 1.389217 |
| 132 | 1.470800 | 1.461442 | 1.450417 | 1.437746 | 1.423448 | 1.407547 |
| 134 | 1.493252 | 1.483421 | 1.471842 | 1.458535 | 1.443522 | 1.426828 |
| 136 | 1.516918 | 1.506588 | 1.494423 | 1.480444 | 1.464674 | 1.447142 |
| 138 | 1.541908 | 1.531050 | 1.518263 | 1.503572 | 1.487001 | 1.468581 |
| 140 | 1.568346 | 1.556927 | 1.543481 | 1.528033 | 1.510613 | 1.491252 |
| 142 | 1.596377 | 1.584360 | 1.570213 | 1.553962 | 1.535638 | 1.515277 |
| 144 | 1.626167 | 1.613514 | 1.598619 | 1.581511 | 1.562225 | 1.540797 |
| 146 | 1.657913 | 1.644578 | 1.628884 | 1.610861 | 1.590545 | 1.567978 |
| 148 | 1.691844 | 1.677780 | 1.661228 | 1.642223 | 1.620804 | 1.597017 |
| 150 | 1.728235 | 1.713386 | 1.695912 | 1.675851 | 1.653246 | 1.628146 |
| 152 | 1.767420 | 1.751722 | 1.733252 | 1.712051 | 1.688165 | 1.661647 |
| 154 | 1.809801 | 1.793183 | 1.773633 | 1.751195 | 1.725920 | 1.697865 |
| 156 | 1.855882 | 1.838259 | 1.817531 | 1.793744 | 1.766955 | 1.737226 |
| 158 | 1.906293 | 1.887569 | 1.865547 | 1.840281 | 1.811831 | 1.780265 |
| 160 | 1.961846 | 1.941905 | 1.918455 | 1.891554 | 1.861269 | 1.827674 |
| 162 | 2.023610 | 2.002311 | 1.977269 | 1.948545 | 1.916215 | 1.880359 |
| 164 | 2.093029 | 2.070200 | 2.043362 | 2.012586 | 1.977952 | 1.939550 |
| 166 | 2.172126 | 2.147549 | 2.118661 | 2.085540 | 2.048274 | 2.006964 |
| 168 | 2.263860 | 2.237252 | 2.205980 | 2.170133 | 2.129810 | 2.085121 |
| 170 | 2.372818 | 2.343790 | 2.309681 | 2.270590 | 2.226627 | 2.177917 |
| 172 | 2.506673 | 2.474668 | 2.437066 | 2.393981 | 2.345538 | 2.291881 |
| 174 | 2.679806 | 2.643940 | 2.601813 | 2.553554 | 2.499308 | 2.439243 |
| 176 | 2.924477 | 2.883149 | 2.834616 | 2.779033 | 2.716576 | 2.647441 |
| 178 | 3.343592 | 3.292894 | 3.233376 | 3.165235 | 3.088695 | 3.004010 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

17

$$P_\nu(\cos \theta)$$

| $\nu$ | -.30 | -.28 | -.26 | -.24 | -.22 | -.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | 1.000063 | 1.000061 | 1.000058 | 1.000055 | 1.000052 | 1.000048 |
| 4 | 1.000255 | 1.000245 | 1.000234 | 1.000222 | 1.000209 | 1.000194 |
| 6 | 1.000576 | 1.000552 | 1.000527 | 1.000500 | 1.000470 | 1.000438 |
| 8 | 1.001024 | 1.000983 | 1.000938 | 1.000889 | 1.000837 | 1.000780 |
| 10 | 1.001601 | 1.001537 | 1.001467 | 1.001391 | 1.001308 | 1.001220 |
| 12 | 1.002308 | 1.002215 | 1.002114 | 1.002004 | 1.001886 | 1.001758 |
| 14 | 1.003144 | 1.003018 | 1.002880 | 1.002731 | 1.002569 | 1.002395 |
| 16 | 1.004111 | 1.003946 | 1.003766 | 1.003570 | 1.003359 | 1.003131 |
| 18 | 1.005209 | 1.005001 | 1.004772 | 1.004524 | 1.004255 | 1.003967 |
| 20 | 1.006439 | 1.006181 | 1.005899 | 1.005592 | 1.005260 | 1.004904 |
| 22 | 1.007803 | 1.007490 | 1.007148 | 1.006775 | 1.006374 | 1.005942 |
| 24 | 1.009301 | 1.008928 | 1.008519 | 1.008076 | 1.007596 | 1.007082 |
| 26 | 1.010934 | 1.010495 | 1.010015 | 1.009493 | 1.008930 | 1.008325 |
| 28 | 1.012704 | 1.012194 | 1.011636 | 1.011030 | 1.010375 | 1.009672 |
| 30 | 1.014613 | 1.014026 | 1.013384 | 1.012686 | 1.011933 | 1.011124 |
| 32 | 1.016661 | 1.015992 | 1.015260 | 1.014464 | 1.013604 | 1.012682 |
| 34 | 1.018852 | 1.018094 | 1.017265 | 1.016364 | 1.015391 | 1.014347 |
| 36 | 1.021186 | 1.020334 | 1.019401 | 1.018389 | 1.017295 | 1.016121 |
| 38 | 1.023665 | 1.022714 | 1.021671 | 1.020539 | 1.019317 | 1.018006 |
| 40 | 1.026293 | 1.025235 | 1.024076 | 1.022818 | 1.021460 | 1.020002 |
| 42 | 1.029071 | 1.027900 | 1.026618 | 1.025226 | 1.023724 | 1.022112 |
| 44 | 1.032001 | 1.030712 | 1.029300 | 1.027767 | 1.026112 | 1.024337 |
| 46 | 1.035087 | 1.033672 | 1.032123 | 1.030441 | 1.028627 | 1.026679 |
| 48 | 1.038331 | 1.036784 | 1.035091 | 1.033253 | 1.031269 | 1.029140 |
| 50 | 1.041737 | 1.040051 | 1.038206 | 1.036203 | 1.034042 | 1.031723 |
| 52 | 1.045306 | 1.043475 | 1.041471 | 1.039295 | 1.036948 | 1.034429 |
| 54 | 1.049044 | 1.047060 | 1.044889 | 1.042532 | 1.039989 | 1.037262 |
| 56 | 1.052953 | 1.050809 | 1.048463 | 1.045917 | 1.043170 | 1.040223 |
| 58 | 1.057037 | 1.054726 | 1.052197 | 1.049452 | 1.046492 | 1.043316 |
| 60 | 1.061301 | 1.058815 | 1.056095 | 1.053142 | 1.049958 | 1.046543 |
| 62 | 1.065749 | 1.063080 | 1.060160 | 1.056991 | 1.053573 | 1.049909 |
| 64 | 1.070385 | 1.067525 | 1.064396 | 1.061001 | 1.057340 | 1.053414 |
| 66 | 1.075215 | 1.072155 | 1.068809 | 1.065177 | 1.061262 | 1.057065 |
| 68 | 1.080243 | 1.076975 | 1.073402 | 1.069524 | 1.065344 | 1.060863 |
| 70 | 1.085475 | 1.081991 | 1.078180 | 1.074046 | 1.069590 | 1.064814 |
| 72 | 1.090917 | 1.087207 | 1.083150 | 1.078749 | 1.074005 | 1.068922 |
| 74 | 1.096575 | 1.092630 | 1.088316 | 1.083636 | 1.078594 | 1.073190 |
| 76 | 1.102457 | 1.098266 | 1.093684 | 1.088715 | 1.083361 | 1.077624 |
| 78 | 1.108568 | 1.104121 | 1.099261 | 1.093991 | 1.088312 | 1.082229 |
| 80 | 1.114917 | 1.110204 | 1.105054 | 1.099470 | 1.093453 | 1.087010 |
| 82 | 1.121511 | 1.116522 | 1.111070 | 1.105158 | 1.098792 | 1.091973 |
| 84 | 1.128359 | 1.123082 | 1.117316 | 1.111064 | 1.104332 | 1.097124 |
| 86 | 1.135471 | 1.129893 | 1.123800 | 1.117196 | 1.110084 | 1.102469 |
| 88 | 1.142855 | 1.136966 | 1.130532 | 1.123560 | 1.116053 | 1.108017 |
| 90 | 1.150523 | 1.144308 | 1.137521 | 1.130166 | 1.122248 | 1.113773 |

| $\nu$ | −.30 | −.28 | −.26 | −.24 | −.22 | −.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.150523 | 1.144308 | 1.137521 | 1.130166 | 1.122248 | 1.113773 |
| 92 | 1.158485 | 1.151933 | 1.144777 | 1.137023 | 1.128678 | 1.119747 |
| 94 | 1.166754 | 1.159849 | 1.152310 | 1.144142 | 1.135352 | 1.125947 |
| 96 | 1.175341 | 1.168070 | 1.160132 | 1.151532 | 1.142279 | 1.132381 |
| 98 | 1.184262 | 1.176609 | 1.168255 | 1.159207 | 1.149472 | 1.139061 |
| 100 | 1.193530 | 1.185480 | 1.176693 | 1.167177 | 1.156941 | 1.145996 |
| 102 | 1.203163 | 1.194697 | 1.185459 | 1.175457 | 1.164699 | 1.153198 |
| 104 | 1.213176 | 1.204279 | 1.194570 | 1.184060 | 1.172760 | 1.160679 |
| 106 | 1.223588 | 1.214241 | 1.204042 | 1.193004 | 1.181137 | 1.168453 |
| 108 | 1.234420 | 1.224603 | 1.213894 | 1.202304 | 1.189846 | 1.176534 |
| 110 | 1.245693 | 1.235386 | 1.224143 | 1.211979 | 1.198905 | 1.184938 |
| 112 | 1.257431 | 1.246612 | 1.234813 | 1.222048 | 1.208333 | 1.193682 |
| 114 | 1.269660 | 1.258306 | 1.245926 | 1.232535 | 1.218149 | 1.202785 |
| 116 | 1.282409 | 1.270495 | 1.257507 | 1.243462 | 1.228375 | 1.212267 |
| 118 | 1.295707 | 1.283208 | 1.269585 | 1.254855 | 1.239037 | 1.222150 |
| 120 | 1.309589 | 1.296478 | 1.282190 | 1.266743 | 1.250159 | 1.232459 |
| 122 | 1.324093 | 1.310340 | 1.295355 | 1.279158 | 1.261773 | 1.243221 |
| 124 | 1.339259 | 1.324833 | 1.309118 | 1.292135 | 1.273909 | 1.254465 |
| 126 | 1.355133 | 1.340001 | 1.323519 | 1.305711 | 1.286604 | 1.266225 |
| 128 | 1.371767 | 1.355893 | 1.338605 | 1.319930 | 1.299898 | 1.278537 |
| 130 | 1.389217 | 1.372561 | 1.354426 | 1.334840 | 1.313835 | 1.291442 |
| 132 | 1.407547 | 1.390068 | 1.371041 | 1.350495 | 1.328466 | 1.304987 |
| 134 | 1.426828 | 1.408481 | 1.388512 | 1.366955 | 1.343846 | 1.319224 |
| 136 | 1.447142 | 1.427877 | 1.406914 | 1.384288 | 1.360040 | 1.334210 |
| 138 | 1.468581 | 1.448346 | 1.426330 | 1.402574 | 1.377120 | 1.350013 |
| 140 | 1.491252 | 1.469987 | 1.446855 | 1.421901 | 1.395169 | 1.366709 |
| 142 | 1.515277 | 1.492916 | 1.468599 | 1.442372 | 1.414283 | 1.384388 |
| 144 | 1.540797 | 1.517270 | 1.491690 | 1.464107 | 1.434575 | 1.403151 |
| 146 | 1.567978 | 1.543205 | 1.516277 | 1.487246 | 1.456173 | 1.423119 |
| 148 | 1.597017 | 1.570909 | 1.542536 | 1.511956 | 1.479232 | 1.444433 |
| 150 | 1.628146 | 1.600603 | 1.570677 | 1.538432 | 1.503937 | 1.467264 |
| 152 | 1.661647 | 1.632556 | 1.600955 | 1.566913 | 1.530507 | 1.491814 |
| 154 | 1.697865 | 1.667095 | 1.633678 | 1.597690 | 1.559213 | 1.518333 |
| 156 | 1.737226 | 1.704625 | 1.669230 | 1.631123 | 1.590391 | 1.547130 |
| 158 | 1.780265 | 1.745659 | 1.708096 | 1.667665 | 1.624463 | 1.578595 |
| 160 | 1.827674 | 1.790852 | 1.750895 | 1.707900 | 1.661973 | 1.613227 |
| 162 | 1.880359 | 1.841070 | 1.798445 | 1.752595 | 1.703633 | 1.651685 |
| 164 | 1.939550 | 1.897480 | 1.851853 | 1.802788 | 1.750412 | 1.694861 |
| 166 | 2.006964 | 1.961722 | 1.912668 | 1.859934 | 1.803662 | 1.744002 |
| 168 | 2.085121 | 2.036191 | 1.983156 | 1.926162 | 1.865366 | 1.800936 |
| 170 | 2.177917 | 2.124601 | 2.066830 | 2.004769 | 1.938594 | 1.868494 |
| 172 | 2.291881 | 2.233168 | 2.169571 | 2.101278 | 2.028488 | 1.951416 |
| 174 | 2.439243 | 2.373539 | 2.302397 | 2.226034 | 2.144681 | 2.058585 |
| 176 | 2.647441 | 2.571847 | 2.490033 | 2.402255 | 2.308791 | 2.209935 |
| 178 | 3.004010 | 2.911459 | 2.811347 | 2.704003 | 2.589781 | 2.469057 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$P_\nu(\cos\theta)$$

| $\nu$ | -.20 | -.18 | -.16 | -.14 | -.12 | -.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | 1.000048 | 1.000044 | 1.000040 | 1.000036 | 1.000032 | 1.000027 |
| 4 | 1.000194 | 1.000179 | 1.000163 | 1.000146 | 1.000128 | 1.000109 |
| 6 | 1.000438 | 1.000404 | 1.000368 | 1.000330 | 1.000289 | 1.000246 |
| 8 | 1.000780 | 1.000720 | 1.000655 | 1.000587 | 1.000515 | 1.000439 |
| 10 | 1.001220 | 1.001125 | 1.001025 | 1.000918 | 1.000805 | 1.000686 |
| 12 | 1.001758 | 1.001622 | 1.001476 | 1.001323 | 1.001160 | 1.000988 |
| 14 | 1.002395 | 1.002209 | 1.002012 | 1.001802 | 1.001580 | 1.001347 |
| 16 | 1.003131 | 1.002888 | 1.002630 | 1.002356 | 1.002066 | 1.001761 |
| 18 | 1.003967 | 1.003660 | 1.003332 | 1.002985 | 1.002617 | 1.002230 |
| 20 | 1.004904 | 1.004524 | 1.004119 | 1.003689 | 1.003235 | 1.002757 |
| 22 | 1.005942 | 1.005481 | 1.004990 | 1.004470 | 1.003920 | 1.003340 |
| 24 | 1.007082 | 1.006532 | 1.005947 | 1.005327 | 1.004671 | 1.003980 |
| 26 | 1.008325 | 1.007679 | 1.006991 | 1.006261 | 1.005490 | 1.004678 |
| 28 | 1.009672 | 1.008921 | 1.008121 | 1.007274 | 1.006378 | 1.005434 |
| 30 | 1.011124 | 1.010259 | 1.009340 | 1.008365 | 1.007335 | 1.006249 |
| 32 | 1.012682 | 1.011696 | 1.010647 | 1.009535 | 1.008361 | 1.007123 |
| 34 | 1.014347 | 1.013232 | 1.012045 | 1.010787 | 1.009458 | 1.008057 |
| 36 | 1.016121 | 1.014867 | 1.013533 | 1.012119 | 1.010625 | 1.009052 |
| 38 | 1.018006 | 1.016605 | 1.015114 | 1.013534 | 1.011866 | 1.010108 |
| 40 | 1.020002 | 1.018445 | 1.016788 | 1.015033 | 1.013179 | 1.011227 |
| 42 | 1.022112 | 1.020389 | 1.018558 | 1.016616 | 1.014567 | 1.012408 |
| 44 | 1.024337 | 1.022440 | 1.020423 | 1.018286 | 1.016029 | 1.013654 |
| 46 | 1.026679 | 1.024599 | 1.022387 | 1.020043 | 1.017569 | 1.014964 |
| 48 | 1.029140 | 1.026867 | 1.024450 | 1.021889 | 1.019186 | 1.016340 |
| 50 | 1.031723 | 1.029247 | 1.026614 | 1.023826 | 1.020882 | 1.017784 |
| 52 | 1.034429 | 1.031740 | 1.028882 | 1.025854 | 1.022659 | 1.019296 |
| 54 | 1.037262 | 1.034350 | 1.031255 | 1.027977 | 1.024517 | 1.020877 |
| 56 | 1.040223 | 1.037078 | 1.033735 | 1.030195 | 1.026460 | 1.022530 |
| 58 | 1.043316 | 1.039927 | 1.036325 | 1.032511 | 1.028487 | 1.024254 |
| 60 | 1.046543 | 1.042899 | 1.039027 | 1.034927 | 1.030602 | 1.026053 |
| 62 | 1.049909 | 1.045998 | 1.041843 | 1.037446 | 1.032806 | 1.027927 |
| 64 | 1.053414 | 1.049227 | 1.044777 | 1.040068 | 1.035102 | 1.029879 |
| 66 | 1.057065 | 1.052587 | 1.047831 | 1.042798 | 1.037490 | 1.031910 |
| 68 | 1.060863 | 1.056084 | 1.051008 | 1.045637 | 1.039974 | 1.034021 |
| 70 | 1.064814 | 1.059721 | 1.054311 | 1.048589 | 1.042556 | 1.036215 |
| 72 | 1.068922 | 1.063501 | 1.057745 | 1.051657 | 1.045239 | 1.038495 |
| 74 | 1.073190 | 1.067429 | 1.061312 | 1.054843 | 1.048026 | 1.040863 |
| 76 | 1.077624 | 1.071508 | 1.065017 | 1.058152 | 1.050919 | 1.043320 |
| 78 | 1.082229 | 1.075744 | 1.068862 | 1.061587 | 1.053921 | 1.045870 |
| 80 | 1.087010 | 1.080142 | 1.072854 | 1.065151 | 1.057036 | 1.048516 |
| 82 | 1.091973 | 1.084706 | 1.076997 | 1.068849 | 1.060268 | 1.051260 |
| 84 | 1.097124 | 1.089443 | 1.081295 | 1.072686 | 1.063621 | 1.054105 |
| 86 | 1.102469 | 1.094358 | 1.085755 | 1.076666 | 1.067097 | 1.057056 |
| 88 | 1.108017 | 1.099457 | 1.090381 | 1.080793 | 1.070702 | 1.060114 |
| 90 | 1.113773 | 1.104748 | 1.095180 | 1.085075 | 1.074441 | 1.063286 |

| $\nu$ | $-.20$ | $-.18$ | $-.16$ | $-.14$ | $-.12$ | $-.10$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.113773 | 1.104748 | 1.095180 | 1.085075 | 1.074441 | 1.063286 |
| 92 | 1.119747 | 1.110238 | 1.100158 | 1.089515 | 1.078318 | 1.066574 |
| 94 | 1.125947 | 1.115934 | 1.105323 | 1.094121 | 1.082338 | 1.069984 |
| 96 | 1.132381 | 1.121846 | 1.110682 | 1.098899 | 1.086508 | 1.073519 |
| 98 | 1.139061 | 1.127981 | 1.116243 | 1.103856 | 1.090833 | 1.077185 |
| 100 | 1.145996 | 1.134350 | 1.122014 | 1.109000 | 1.095320 | 1.080987 |
| 102 | 1.153198 | 1.140962 | 1.128005 | 1.114339 | 1.099977 | 1.084932 |
| 104 | 1.160679 | 1.147830 | 1.134227 | 1.119882 | 1.104810 | 1.089026 |
| 106 | 1.168453 | 1.154966 | 1.140689 | 1.125638 | 1.109828 | 1.093276 |
| 108 | 1.176534 | 1.162382 | 1.147404 | 1.131618 | 1.115040 | 1.097688 |
| 110 | 1.184938 | 1.170093 | 1.154385 | 1.137833 | 1.120456 | 1.102273 |
| 112 | 1.193682 | 1.178114 | 1.161646 | 1.144297 | 1.126087 | 1.107037 |
| 114 | 1.202785 | 1.186463 | 1.169201 | 1.151020 | 1.131943 | 1.111992 |
| 116 | 1.212267 | 1.195158 | 1.177068 | 1.158020 | 1.138038 | 1.117147 |
| 118 | 1.222150 | 1.204218 | 1.185264 | 1.165311 | 1.144385 | 1.122514 |
| | | | | | | |
| 120 | 1.232459 | 1.213668 | 1.193810 | 1.172911 | 1.151001 | 1.128106 |
| 122 | 1.243221 | 1.223530 | 1.202727 | 1.180840 | 1.157900 | 1.133938 |
| 124 | 1.254465 | 1.233833 | 1.212040 | 1.189119 | 1.165102 | 1.140023 |
| 126 | 1.266225 | 1.244605 | 1.221777 | 1.197772 | 1.172628 | 1.146380 |
| 128 | 1.278537 | 1.255881 | 1.231966 | 1.206825 | 1.180500 | 1.153028 |
| 130 | 1.291442 | 1.267699 | 1.242641 | 1.216309 | 1.188743 | 1.159988 |
| 132 | 1.304987 | 1.280099 | 1.253841 | 1.226255 | 1.197387 | 1.167284 |
| 134 | 1.319224 | 1.293129 | 1.265607 | 1.236702 | 1.206464 | 1.174943 |
| 136 | 1.334210 | 1.306843 | 1.277987 | 1.247692 | 1.216010 | 1.182996 |
| 138 | 1.350013 | 1.321301 | 1.291037 | 1.259274 | 1.226068 | 1.191478 |
| 140 | 1.366709 | 1.336574 | 1.304819 | 1.271501 | 1.236683 | 1.200428 |
| 142 | 1.384388 | 1.352742 | 1.319404 | 1.284440 | 1.247913 | 1.209894 |
| 144 | 1.403151 | 1.369897 | 1.334878 | 1.298162 | 1.259821 | 1.219928 |
| 146 | 1.423119 | 1.388151 | 1.351339 | 1.312756 | 1.272481 | 1.230594 |
| 148 | 1.444433 | 1.407631 | 1.368901 | 1.328324 | 1.285983 | 1.241965 |
| | | | | | | |
| 150 | 1.467264 | 1.428493 | 1.387705 | 1.344987 | 1.300431 | 1.254130 |
| 152 | 1.491814 | 1.450921 | 1.407916 | 1.362895 | 1.315954 | 1.267197 |
| 154 | 1.518333 | 1.475143 | 1.429740 | 1.382225 | 1.332706 | 1.281295 |
| 156 | 1.547130 | 1.501440 | 1.453428 | 1.403203 | 1.350882 | 1.296586 |
| 158 | 1.578595 | 1.530168 | 1.479299 | 1.426109 | 1.370724 | 1.313276 |
| 160 | 1.613227 | 1.561782 | 1.507764 | 1.451306 | 1.392545 | 1.331625 |
| 162 | 1.651685 | 1.596882 | 1.539362 | 1.479270 | 1.416757 | 1.351980 |
| 164 | 1.694861 | 1.636280 | 1.574822 | 1.510645 | 1.443917 | 1.374809 |
| 166 | 1.744002 | 1.681114 | 1.615167 | 1.546336 | 1.474806 | 1.400765 |
| 168 | 1.800936 | 1.733050 | 1.661895 | 1.587666 | 1.510568 | 1.430811 |
| 170 | 1.868494 | 1.794667 | 1.717324 | 1.636684 | 1.552974 | 1.466431 |
| 172 | 1.951416 | 1.870288 | 1.785340 | 1.696822 | 1.604992 | 1.510118 |
| 174 | 2.058585 | 1.968007 | 1.873221 | 1.774514 | 1.672184 | 1.566539 |
| 176 | 2.209935 | 2.105997 | 1.997305 | 1.884198 | 1.767031 | 1.646171 |
| 178 | 2.469057 | 2.342227 | 2.209708 | 2.071934 | 1.929357 | 1.782444 |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$P_\nu(\cos\theta)$$

| $\nu$ | $-.10$ | $-.08$ | $-.06$ | $-.04$ | $-.02$ | $.00$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | 1.000027 | 1.000022 | 1.000017 | 1.000011 | 1.000005 | 1.000000 |
| 4 | 1.000109 | 1.000089 | 1.000068 | 1.000046 | 1.000023 | 1.000000 |
| 6 | 1.000246 | 1.000201 | 1.000154 | 1.000105 | 1.000053 | 1.000000 |
| 8 | 1.000439 | 1.000359 | 1.000275 | 1.000187 | 1.000095 | 1.000000 |
| 10 | 1.000686 | 1.000561 | 1.000430 | 1.000292 | 1.000149 | 1.000000 |
| 12 | 1.000988 | 1.000808 | 1.000619 | 1.000421 | 1.000215 | 1.000000 |
| 14 | 1.001347 | 1.001101 | 1.000843 | 1.000574 | 1.000293 | 1.000000 |
| 16 | 1.001761 | 1.001439 | 1.001103 | 1.000751 | 1.000383 | 1.000000 |
| 18 | 1.002230 | 1.001824 | 1.001397 | 1.000951 | 1.000485 | 1.000000 |
| 20 | 1.002757 | 1.002254 | 1.001727 | 1.001175 | 1.000600 | 1.000000 |
| 22 | 1.003340 | 1.002731 | 1.002092 | 1.001424 | 1.000726 | 1.000000 |
| 24 | 1.003980 | 1.003254 | 1.002493 | 1.001697 | 1.000866 | 1.000000 |
| 26 | 1.004678 | 1.003825 | 1.002930 | 1.001994 | 1.001017 | 1.000000 |
| 28 | 1.005434 | 1.004443 | 1.003404 | 1.002317 | 1.001182 | 1.000000 |
| 30 | 1.006249 | 1.005109 | 1.003914 | 1.002664 | 1.001359 | 1.000000 |
| 32 | 1.007123 | 1.005823 | 1.004461 | 1.003036 | 1.001549 | 1.000000 |
| 34 | 1.008057 | 1.006587 | 1.005045 | 1.003434 | 1.001752 | 1.000000 |
| 36 | 1.009052 | 1.007400 | 1.005668 | 1.003857 | 1.001967 | 1.000000 |
| 38 | 1.010108 | 1.008263 | 1.006328 | 1.004306 | 1.002196 | 1.000000 |
| 40 | 1.011227 | 1.009176 | 1.007028 | 1.004782 | 1.002439 | 1.000000 |
| 42 | 1.012408 | 1.010141 | 1.007767 | 1.005284 | 1.002695 | 1.000000 |
| 44 | 1.013654 | 1.011158 | 1.008545 | 1.005814 | 1.002965 | 1.000000 |
| 46 | 1.014964 | 1.012229 | 1.009364 | 1.006371 | 1.003249 | 1.000000 |
| 48 | 1.016340 | 1.013353 | 1.010224 | 1.006955 | 1.003547 | 1.000000 |
| 50 | 1.017784 | 1.014532 | 1.011126 | 1.007569 | 1.003859 | 1.000000 |
| 52 | 1.019296 | 1.015766 | 1.012070 | 1.008210 | 1.004186 | 1.000000 |
| 54 | 1.020877 | 1.017057 | 1.013058 | 1.008881 | 1.004528 | 1.000000 |
| 56 | 1.022530 | 1.018406 | 1.014090 | 1.009582 | 1.004885 | 1.000000 |
| 58 | 1.024254 | 1.019813 | 1.015166 | 1.010313 | 1.005257 | 1.000000 |
| 60 | 1.026053 | 1.021281 | 1.016288 | 1.011076 | 1.005645 | 1.000000 |
| 62 | 1.027927 | 1.022810 | 1.017457 | 1.011870 | 1.006050 | 1.000000 |
| 64 | 1.029879 | 1.024402 | 1.018674 | 1.012696 | 1.006470 | 1.000000 |
| 66 | 1.031910 | 1.026059 | 1.019940 | 1.013555 | 1.006907 | 1.000000 |
| 68 | 1.034021 | 1.027780 | 1.021255 | 1.014448 | 1.007362 | 1.000000 |
| 70 | 1.036215 | 1.029570 | 1.022622 | 1.015376 | 1.007834 | 1.000000 |
| 72 | 1.038495 | 1.031428 | 1.024042 | 1.016339 | 1.008323 | 1.000000 |
| 74 | 1.040863 | 1.033358 | 1.025515 | 1.017338 | 1.008832 | 1.000000 |
| 76 | 1.043320 | 1.035361 | 1.027044 | 1.018375 | 1.009359 | 1.000000 |
| 78 | 1.045870 | 1.037438 | 1.028630 | 1.019451 | 1.009905 | 1.000000 |
| 80 | 1.048516 | 1.039593 | 1.030275 | 1.020566 | 1.010472 | 1.000000 |
| 82 | 1.051260 | 1.041828 | 1.031980 | 1.021722 | 1.011059 | 1.000000 |
| 84 | 1.054105 | 1.044145 | 1.033748 | 1.022920 | 1.011668 | 1.000000 |
| 86 | 1.057056 | 1.046547 | 1.035580 | 1.024161 | 1.012298 | 1.000000 |
| 88 | 1.060114 | 1.049037 | 1.037479 | 1.025447 | 1.012951 | 1.000000 |
| 90 | 1.063286 | 1.051618 | 1.039446 | 1.026779 | 1.013627 | 1.000000 |

$$P_\nu(\cos \theta)$$

| $\nu$ | −.10 | −.08 | −.06 | −.04 | −.02 | .00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.063286 | 1.051618 | 1.039446 | 1.026779 | 1.013627 | 1.000000 |
| 92 | 1.066574 | 1.054293 | 1.041485 | 1.028160 | 1.014328 | 1.000000 |
| 94 | 1.069984 | 1.057067 | 1.043599 | 1.029590 | 1.015053 | 1.000000 |
| 96 | 1.073519 | 1.059942 | 1.045789 | 1.031073 | 1.015805 | 1.000000 |
| 98 | 1.077185 | 1.062923 | 1.048060 | 1.032609 | 1.016584 | 1.000000 |
| 100 | 1.080987 | 1.066014 | 1.050413 | 1.034201 | 1.017391 | 1.000000 |
| 102 | 1.084932 | 1.069220 | 1.052854 | 1.035851 | 1.018227 | 1.000000 |
| 104 | 1.089026 | 1.072546 | 1.055385 | 1.037562 | 1.019094 | 1.000000 |
| 106 | 1.093276 | 1.075998 | 1.058012 | 1.039337 | 1.019993 | 1.000000 |
| 108 | 1.097688 | 1.079581 | 1.060738 | 1.041179 | 1.020926 | 1.000000 |
| 110 | 1.102273 | 1.083303 | 1.063568 | 1.043091 | 1.021893 | 1.000000 |
| 112 | 1.107037 | 1.087170 | 1.066509 | 1.045076 | 1.022898 | 1.000000 |
| 114 | 1.111992 | 1.091191 | 1.069565 | 1.047139 | 1.023941 | 1.000000 |
| 116 | 1.117147 | 1.095373 | 1.072742 | 1.049284 | 1.025026 | 1.000000 |
| 118 | 1.122514 | 1.099726 | 1.076049 | 1.051515 | 1.026154 | 1.000000 |
| 120 | 1.128106 | 1.104260 | 1.079493 | 1.053837 | 1.027328 | 1.000000 |
| 122 | 1.133938 | 1.108986 | 1.083081 | 1.056257 | 1.028550 | 1.000000 |
| 124 | 1.140023 | 1.113918 | 1.086824 | 1.058779 | 1.029824 | 1.000000 |
| 126 | 1.146380 | 1.119068 | 1.090732 | 1.061413 | 1.031154 | 1.000000 |
| 128 | 1.153028 | 1.124452 | 1.094816 | 1.064164 | 1.032542 | 1.000000 |
| 130 | 1.159988 | 1.130088 | 1.099089 | 1.067041 | 1.033994 | 1.000000 |
| 132 | 1.167284 | 1.135993 | 1.103566 | 1.070055 | 1.035514 | 1.000000 |
| 134 | 1.174943 | 1.142191 | 1.108264 | 1.073217 | 1.037108 | 1.000000 |
| 136 | 1.182996 | 1.148706 | 1.113199 | 1.076537 | 1.038782 | 1.000000 |
| 138 | 1.191478 | 1.155566 | 1.118395 | 1.080031 | 1.040543 | 1.000000 |
| 140 | 1.200428 | 1.162802 | 1.123874 | 1.083716 | 1.042399 | 1.000000 |
| 142 | 1.209894 | 1.170453 | 1.129666 | 1.087608 | 1.044359 | 1.000000 |
| 144 | 1.219928 | 1.178562 | 1.135801 | 1.091731 | 1.046434 | 1.000000 |
| 146 | 1.230594 | 1.187177 | 1.142319 | 1.096109 | 1.048637 | 1.000000 |
| 148 | 1.241965 | 1.196361 | 1.149264 | 1.100772 | 1.050983 | 1.000000 |
| 150 | 1.254130 | 1.206183 | 1.156690 | 1.105757 | 1.053490 | 1.000000 |
| 152 | 1.267197 | 1.216729 | 1.164661 | 1.111106 | 1.056179 | 1.000000 |
| 154 | 1.281295 | 1.228105 | 1.173257 | 1.116872 | 1.059077 | 1.000000 |
| 156 | 1.296586 | 1.240441 | 1.182575 | 1.123121 | 1.062216 | 1.000000 |
| 158 | 1.313276 | 1.253901 | 1.192739 | 1.129936 | 1.065639 | 1.000000 |
| 160 | 1.331625 | 1.268695 | 1.203908 | 1.137422 | 1.069397 | 1.000000 |
| 162 | 1.351980 | 1.285103 | 1.216292 | 1.145720 | 1.073562 | 1.000000 |
| 164 | 1.374809 | 1.303499 | 1.230173 | 1.155018 | 1.078228 | 1.000000 |
| 166 | 1.400765 | 1.324412 | 1.245949 | 1.165583 | 1.083528 | 1.000000 |
| 168 | 1.430811 | 1.348614 | 1.264201 | 1.177804 | 1.089657 | 1.000000 |
| 170 | 1.466431 | 1.377300 | 1.285831 | 1.192283 | 1.096916 | 1.000000 |
| 172 | 1.510118 | 1.412476 | 1.312349 | 1.210030 | 1.105813 | 1.000000 |
| 174 | 1.566539 | 1.457897 | 1.346585 | 1.232937 | 1.117293 | 1.000000 |
| 176 | 1.646171 | 1.521995 | 1.394891 | 1.265254 | 1.133487 | 1.000000 |
| 178 | 1.782444 | 1.631673 | 1.477537 | 1.320538 | 1.161186 | 1.000000 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | 1.000000 |

$$P_\nu(\cos\theta)$$

| $\nu$ | .00 | .02 | .04 | .06 | .08 | .10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | 1.000000 | .999993 | .999987 | .999980 | .999973 | .999966 |
| 4 | 1.000000 | .999975 | .999949 | .999922 | .999894 | .999866 |
| 6 | 1.000000 | .999944 | .999885 | .999825 | .999763 | .999698 |
| 8 | 1.000000 | .999900 | .999797 | .999689 | .999578 | .999463 |
| 10 | 1.000000 | .999844 | .999682 | .999515 | .999341 | .999161 |
| 12 | 1.000000 | .999776 | .999543 | .999301 | .999051 | .998791 |
| 14 | 1.000000 | .999694 | .999377 | .999048 | .998707 | .998354 |
| 16 | 1.000000 | .999601 | .999186 | .998756 | .998310 | .997849 |
| 18 | 1.000000 | .999494 | .998969 | .998424 | .997860 | .997276 |
| 20 | 1.000000 | .999375 | .998726 | .998053 | .997356 | .996634 |
| 22 | 1.000000 | .999243 | .998457 | .997642 | .996798 | .995924 |
| 24 | 1.000000 | .999098 | .998162 | .997191 | .996185 | .995145 |
| 26 | 1.000000 | .998940 | .997841 | .996700 | .995518 | .994296 |
| 28 | 1.000000 | .998770 | .997492 | .996168 | .994796 | .993377 |
| 30 | 1.000000 | .998586 | .997117 | .995595 | .994018 | .992387 |
| 32 | 1.000000 | .998388 | .996715 | .994980 | .993184 | .991326 |
| 34 | 1.000000 | .998177 | .996286 | .994324 | .992294 | .990194 |
| 36 | 1.000000 | .997953 | .995829 | .993627 | .991347 | .988990 |
| 38 | 1.000000 | .997715 | .995344 | .992886 | .990342 | .987712 |
| 40 | 1.000000 | .997463 | .994831 | .992103 | .989279 | .986361 |
| 42 | 1.000000 | .997197 | .994289 | .991276 | .988158 | .984936 |
| 44 | 1.000000 | .996917 | .993719 | .990406 | .986977 | .983435 |
| 46 | 1.000000 | .996623 | .993119 | .989490 | .985736 | .981858 |
| 48 | 1.000000 | .996314 | .992490 | .988530 | .984434 | .980203 |
| 50 | 1.000000 | .995990 | .991831 | .987524 | .983071 | .978471 |
| 52 | 1.000000 | .995651 | .991141 | .986472 | .981644 | .976659 |
| 54 | 1.000000 | .995297 | .990420 | .985373 | .980155 | .974767 |
| 56 | 1.000000 | .994927 | .989668 | .984225 | .978600 | .972794 |
| 58 | 1.000000 | .994541 | .988884 | .983029 | .976980 | .970737 |
| 60 | 1.000000 | .994139 | .988067 | .981784 | .975293 | .968596 |
| 62 | 1.000000 | .993721 | .987216 | .980488 | .973538 | .966369 |
| 64 | 1.000000 | .993286 | .986332 | .979140 | .971714 | .964055 |
| 66 | 1.000000 | .992834 | .985413 | .977740 | .969819 | .961652 |
| 68 | 1.000000 | .992364 | .984459 | .976287 | .967852 | .959158 |
| 70 | 1.000000 | .991876 | .983468 | .974778 | .965811 | .956571 |
| 72 | 1.000000 | .991370 | .982441 | .973214 | .963696 | .953889 |
| 74 | 1.000000 | .990846 | .981375 | .971592 | .961503 | .951111 |
| 76 | 1.000000 | .990302 | .980271 | .969912 | .959231 | .948233 |
| 78 | 1.000000 | .989738 | .979126 | .968171 | .956878 | .945254 |
| 80 | 1.000000 | .989154 | .977941 | .966368 | .954442 | .942170 |
| 82 | 1.000000 | .988548 | .976713 | .964502 | .951921 | .938980 |
| 84 | 1.000000 | .987922 | .975443 | .962570 | .949313 | .935679 |
| 86 | 1.000000 | .987273 | .974127 | .960571 | .946614 | .932266 |
| 88 | 1.000000 | .986601 | .972765 | .958503 | .943822 | .928735 |
| 90 | 1.000000 | .985906 | .971356 | .956362 | .940935 | .925085 |

| $\nu$ | .00 | .02 | .04 | .06 | .08 | .10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.000000 | .985906 | .971356 | .956362 | .940935 | .925085 |
| 92 | 1.000000 | .985185 | .969898 | .954148 | .937948 | .921311 |
| 94 | 1.000000 | .984440 | .968388 | .951856 | .934859 | .917409 |
| 96 | 1.000000 | .983668 | .966826 | .949486 | .931663 | .913373 |
| 98 | 1.000000 | .982869 | .965208 | .947033 | .928358 | .909201 |
| 100 | 1.000000 | .982042 | .963534 | .944494 | .924938 | .904885 |
| 102 | 1.000000 | .981184 | .961800 | .941866 | .921400 | .900422 |
| 104 | 1.000000 | .980297 | .960005 | .939145 | .917738 | .895804 |
| 106 | 1.000000 | .979376 | .958145 | .936328 | .913946 | .891025 |
| 108 | 1.000000 | .978422 | .956217 | .933409 | .910020 | .886077 |
| 110 | 1.000000 | .977433 | .954219 | .930384 | .905953 | .880954 |
| 112 | 1.000000 | .976407 | .952147 | .927247 | .901738 | .875647 |
| 114 | 1.000000 | .975341 | .949996 | .923994 | .897367 | .870146 |
| 116 | 1.000000 | .974234 | .947763 | .920618 | .892832 | .864441 |
| 118 | 1.000000 | .973085 | .945443 | .917111 | .888125 | .858521 |
| | | | | | | |
| 120 | 1.000000 | .971889 | .943032 | .913468 | .883235 | .852374 |
| 122 | 1.000000 | .970644 | .940523 | .909678 | .878152 | .845986 |
| 124 | 1.000000 | .969347 | .937910 | .905734 | .872863 | .839343 |
| 126 | 1.000000 | .967995 | .935187 | .901624 | .867355 | .832428 |
| 128 | 1.000000 | .966584 | .932347 | .897338 | .861612 | .825222 |
| 130 | 1.000000 | .965110 | .929379 | .892864 | .855619 | .817704 |
| 132 | 1.000000 | .963567 | .926276 | .888185 | .849357 | .809852 |
| 134 | 1.000000 | .961951 | .923025 | .883288 | .842803 | .801639 |
| 136 | 1.000000 | .960255 | .919616 | .878152 | .835934 | .793034 |
| 138 | 1.000000 | .958472 | .916033 | .872759 | .828723 | .784004 |
| 140 | 1.000000 | .956594 | .912262 | .867082 | .821137 | .774510 |
| 142 | 1.000000 | .954613 | .908283 | .861096 | .813141 | .764506 |
| 144 | 1.000000 | .952516 | .904074 | .854768 | .804691 | .753940 |
| 146 | 1.000000 | .950292 | .899612 | .848060 | .795739 | .742750 |
| 148 | 1.000000 | .947925 | .894865 | .840929 | .786224 | .730862 |
| | | | | | | |
| 150 | 1.000000 | .945398 | .889799 | .833319 | .776077 | .718190 |
| 152 | 1.000000 | .942689 | .884370 | .825169 | .765212 | .704628 |
| 154 | 1.000000 | .939771 | .878526 | .816398 | .753526 | .690047 |
| 156 | 1.000000 | .936613 | .872201 | .806910 | .740889 | .674286 |
| 158 | 1.000000 | .933172 | .865313 | .796582 | .727138 | .657143 |
| 160 | 1.000000 | .929396 | .857757 | .785255 | .712063 | .638358 |
| 162 | 1.000000 | .925214 | .849392 | .772720 | .695388 | .617586 |
| 164 | 1.000000 | .920532 | .840030 | .758696 | .676738 | .594363 |
| 166 | 1.000000 | .915218 | .829405 | .742786 | .655587 | .568036 |
| 168 | 1.000000 | .909075 | .817129 | .724409 | .631166 | .537648 |
| 170 | 1.000000 | .901803 | .802600 | .702666 | .602279 | .501716 |
| 172 | 1.000000 | .892895 | .784808 | .676048 | .566926 | .457754 |
| 174 | 1.000000 | .881405 | .761863 | .641727 | .521353 | .401097 |
| 176 | 1.000000 | .865203 | .729515 | .593353 | .457134 | .321277 |
| 178 | 1.000000 | .837499 | .674210 | .510659 | .347373 | .184873 |
| | | | | | | |
| 180 | 1.000000 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos\theta)$$

| $\nu$ | .10 | .12 | .14 | .16 | .18 | .20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999966 | .999959 | .999951 | .999943 | .999935 | .999926 |
| 4 | .999866 | .999836 | .999805 | .999773 | .999741 | .999707 |
| 6 | .999698 | .999631 | .999562 | .999491 | .999417 | .999341 |
| 8 | .999463 | .999344 | .999221 | .999094 | .998964 | .998829 |
| 10 | .999161 | .998975 | .998783 | .998585 | .998381 | .998170 |
| 12 | .998791 | .998524 | .998247 | .997961 | .997667 | .997365 |
| 14 | .998354 | .997989 | .997613 | .997224 | .996824 | .996411 |
| 16 | .997849 | .997373 | .996880 | .996373 | .995849 | .995311 |
| 18 | .997276 | .996672 | .996049 | .995406 | .994744 | .994062 |
| 20 | .996634 | .995889 | .995119 | .994325 | .993507 | .992665 |
| 22 | .995924 | .995021 | .994089 | .993128 | .992138 | .991118 |
| 24 | .995145 | .994069 | .992959 | .991815 | .990636 | .989422 |
| 26 | .994296 | .993033 | .991729 | .990385 | .989000 | .987575 |
| 28 | .993377 | .991910 | .990397 | .988837 | .987231 | .985577 |
| | | | | | | |
| 30 | .992387 | .990702 | .988964 | .987172 | .985326 | .983427 |
| 32 | .991326 | .989408 | .987428 | .985387 | .983286 | .981124 |
| 34 | .990194 | .988026 | .985788 | .983483 | .981109 | .978667 |
| 36 | .988990 | .986556 | .984045 | .981458 | .978794 | .976055 |
| 38 | .987712 | .984997 | .982196 | .979311 | .976341 | .973287 |
| 40 | .986361 | .983348 | .980242 | .977041 | .973748 | .970361 |
| 42 | .984936 | .981609 | .978180 | .974647 | .971013 | .967277 |
| 44 | .983435 | .979779 | .976010 | .972129 | .968136 | .964032 |
| 46 | .981858 | .977855 | .973730 | .969483 | .965115 | .960626 |
| 48 | .980203 | .975838 | .971340 | .966710 | .961948 | .957056 |
| 50 | .978471 | .973727 | .968838 | .963807 | .958634 | .953321 |
| 52 | .976659 | .971518 | .966223 | .960773 | .955172 | .949420 |
| 54 | .974767 | .969213 | .963492 | .957607 | .951558 | .945349 |
| 56 | .972794 | .966808 | .960645 | .954306 | .947792 | .941107 |
| 58 | .970737 | .964303 | .957679 | .950868 | .943872 | .936692 |
| | | | | | | |
| 60 | .968596 | .961695 | .954593 | .947292 | .939794 | .932101 |
| 62 | .966369 | .958984 | .951385 | .943575 | .935556 | .927332 |
| 64 | .964055 | .956167 | .948053 | .939715 | .931157 | .922382 |
| 66 | .961652 | .953242 | .944594 | .935709 | .926593 | .917248 |
| 68 | .959158 | .950208 | .941006 | .931555 | .921861 | .911927 |
| 70 | .956571 | .947061 | .937286 | .927251 | .916959 | .906415 |
| 72 | .953889 | .943800 | .933432 | .922792 | .911883 | .900710 |
| 74 | .951111 | .940422 | .929442 | .918175 | .906629 | .894807 |
| 76 | .948233 | .936924 | .925311 | .913399 | .901194 | .888703 |
| 78 | .945254 | .933304 | .921037 | .908458 | .895574 | .882393 |
| 80 | .942170 | .929559 | .916616 | .903348 | .889764 | .875872 |
| 82 | .938980 | .925684 | .912044 | .898067 | .883761 | .869136 |
| 84 | .935679 | .921678 | .907318 | .892608 | .877559 | .862179 |
| 86 | .932266 | .917535 | .902432 | .886968 | .871152 | .854996 |
| 88 | .928735 | .913252 | .897384 | .881142 | .864537 | .847581 |
| | | | | | | |
| 90 | .925085 | .908825 | .892167 | .875123 | .857705 | .839927 |

$$P_\nu(\cos \theta)$$

| $\nu$ $\theta$ | .10 | .12 | .14 | .16 | .18 | .20 |
|---|---|---|---|---|---|---|
| 90 | .925085 | .908825 | .892167 | .875123 | .857705 | .839926 |
| 92 | .921311 | .904249 | .886777 | .868906 | .850652 | .832027 |
| 94 | .917409 | .899520 | .881207 | .862485 | .843369 | .823874 |
| 96 | .913373 | .894631 | .875452 | .855853 | .835850 | .815460 |
| 98 | .909201 | .889578 | .869506 | .849003 | .828087 | .806776 |
| 100 | .904885 | .884353 | .863361 | .841927 | .820071 | .797813 |
| 102 | .900422 | .878951 | .857009 | .834616 | .811792 | .788560 |
| 104 | .895804 | .873365 | .850443 | .827061 | .803241 | .779007 |
| 106 | .891025 | .867585 | .843653 | .819251 | .794406 | .769142 |
| 108 | .886077 | .861605 | .836630 | .811178 | .785276 | .758951 |
| 110 | .880954 | .855415 | .829363 | .802827 | .775837 | .748421 |
| 112 | .875647 | .849004 | .821841 | .794187 | .766075 | .737536 |
| 114 | .870146 | .842362 | .814051 | .785243 | .755974 | .726279 |
| 116 | .864441 | .835478 | .805979 | .775980 | .745519 | .714631 |
| 118 | .858521 | .828336 | .797610 | .766381 | .734689 | .702572 |
| | | | | | | |
| 120 | .852374 | .820925 | .788928 | .756427 | .723464 | .690080 |
| 122 | .845986 | .813226 | .779915 | .746098 | .711821 | .677130 |
| 124 | .839343 | .805223 | .770549 | .735370 | .699735 | .663694 |
| 126 | .832428 | .796895 | .760808 | .724218 | .687178 | .649741 |
| 128 | .825222 | .788222 | .750667 | .712613 | .674118 | .635237 |
| 130 | .817704 | .779177 | .740097 | .700524 | .660519 | .620144 |
| 132 | .809852 | .769734 | .729067 | .687915 | .646343 | .604417 |
| 134 | .801639 | .759862 | .717541 | .674745 | .631544 | .588009 |
| 136 | .793034 | .749524 | .705477 | .660967 | .616071 | .570862 |
| 138 | .784004 | .738680 | .692829 | .646530 | .599865 | .552914 |
| 140 | .774510 | .727283 | .679543 | .631373 | .582861 | .534091 |
| 142 | .764506 | .715281 | .665557 | .615426 | .564979 | .514309 |
| 144 | .753940 | .702610 | .650800 | .598607 | .546130 | .493468 |
| 146 | .742750 | .689197 | .635186 | .580820 | .526207 | .471452 |
| 148 | .730862 | .674955 | .618614 | .561954 | .505086 | .448124 |
| | | | | | | |
| 150 | .718190 | .659780 | .600966 | .541871 | .482615 | .423320 |
| 152 | .704628 | .643546 | .582096 | .520408 | .458613 | .396840 |
| 154 | .690047 | .626101 | .561827 | .497365 | .432857 | .368441 |
| 156 | .674286 | .607252 | .539938 | .472494 | .405071 | .337819 |
| 158 | .657143 | .586760 | .516151 | .445478 | .374905 | .304592 |
| 160 | .638358 | .564314 | .490107 | .415914 | .341909 | .268267 |
| 162 | .617586 | .539505 | .461335 | .383267 | .305491 | .228193 |
| 164 | .594363 | .511779 | .429193 | .346813 | .264844 | .183488 |
| 166 | .568036 | .480360 | .392784 | .305536 | .218839 | .132914 |
| 168 | .537648 | .444107 | .350790 | .257947 | .165821 | .074655 |
| 170 | .501716 | .401254 | .301169 | .201734 | .103220 | .005894 |
| 172 | .457754 | .348841 | .240496 | .133024 | .026729 | -.078093 |
| 174 | .401097 | .281311 | .162347 | .044552 | -.071732 | -.186170 |
| 176 | .321277 | .186195 | .052299 | -.080003 | -.210315 | -.338245 |
| 178 | .184873 | .023681 | -.135689 | -.292734 | -.446956 | -.597869 |
| | | | | | | |
| 180 | -∞ | -∞ | -∞ | -∞ | -∞ | -∞ |

$$P_\nu(\cos \theta)$$

| $\nu$ | .20 | .22 | .24 | .26 | .28 | .30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999926 | .999918 | .999909 | .999900 | .999890 | .999881 |
| 4 | .999707 | .999672 | .999637 | .999600 | .999563 | .999524 |
| 6 | .999341 | .999264 | .999183 | .999101 | .999017 | .998930 |
| 8 | .998829 | .998691 | .998548 | .998402 | .998252 | .998098 |
| 10 | .998170 | .997954 | .997732 | .997503 | .997269 | .997028 |
| 12 | .997365 | .997053 | .996733 | .996404 | .996066 | .995719 |
| 14 | .996411 | .995987 | .995551 | .995104 | .994644 | .994172 |
| 16 | .995311 | .994757 | .994187 | .993602 | .993002 | .992386 |
| 18 | .994062 | .993361 | .992640 | .991899 | .991139 | .990360 |
| 20 | .992665 | .991799 | .990908 | .989994 | .989056 | .988094 |
| 22 | .991118 | .990070 | .988993 | .987886 | .986751 | .985587 |
| 24 | .989422 | .988174 | .986892 | .985575 | .984224 | .982839 |
| 26 | .987575 | .986110 | .984605 | .983060 | .981474 | .979849 |
| 28 | .985577 | .983878 | .982132 | .980339 | .978501 | .976616 |
| | | | | | | |
| 30 | .983427 | .981475 | .979470 | .977413 | .975302 | .973139 |
| 32 | .981124 | .978903 | .976621 | .974279 | .971878 | .969417 |
| 34 | .978667 | .976158 | .973581 | .970938 | .968227 | .965450 |
| 36 | .976055 | .973241 | .970351 | .967387 | .964348 | .961235 |
| 38 | .973287 | .970150 | .966929 | .963625 | .960240 | .956772 |
| 40 | .970361 | .966883 | .963313 | .959652 | .955901 | .952059 |
| 42 | .967277 | .963440 | .959503 | .955466 | .951330 | .947095 |
| 44 | .964032 | .959819 | .955496 | .951064 | .946525 | .941878 |
| 46 | .960626 | .956018 | .951291 | .946446 | .941484 | .936407 |
| 48 | .957056 | .952035 | .946886 | .941609 | .936207 | .930680 |
| 50 | .953321 | .947869 | .942279 | .936552 | .930690 | .924694 |
| 52 | .949420 | .943518 | .937469 | .931273 | .924932 | .918448 |
| 54 | .945349 | .938980 | .932452 | .925769 | .918930 | .911940 |
| 56 | .941107 | .934251 | .927228 | .920037 | .912683 | .905166 |
| 58 | .936692 | .929331 | .921792 | .914076 | .906187 | .898125 |
| | | | | | | |
| 60 | .932101 | .924217 | .916143 | .907883 | .899439 | .890814 |
| 62 | .927332 | .918905 | .910278 | .901455 | .892437 | .883229 |
| 64 | .922382 | .913393 | .904194 | .894788 | .885178 | .875368 |
| 66 | .917248 | .907678 | .897887 | .887879 | .877658 | .867228 |
| 68 | .911927 | .901756 | .891355 | .880725 | .869874 | .858803 |
| 70 | .906415 | .895625 | .884593 | .873323 | .861821 | .850092 |
| 72 | .900710 | .889280 | .877597 | .865667 | .853496 | .841089 |
| 74 | .894807 | .882717 | .870364 | .857754 | .844894 | .831790 |
| 76 | .888703 | .875932 | .862889 | .849580 | .836011 | .822191 |
| 78 | .882393 | .868921 | .855167 | .841138 | .826841 | .812285 |
| 80 | .875872 | .861679 | .847193 | .832424 | .817379 | .802068 |
| 82 | .869136 | .854200 | .838962 | .823432 | .807620 | .791534 |
| 84 | .862179 | .846479 | .830468 | .814157 | .797556 | .780676 |
| 86 | .854996 | .838509 | .821704 | .804591 | .787182 | .769488 |
| 88 | .847581 | .830286 | .812664 | .794727 | .776489 | .757961 |
| | | | | | | |
| 90 | .839927 | .821800 | .803340 | .784559 | .765470 | .746089 |

$$P_\nu(\cos \theta)$$

| $\nu$ | .20 | .22 | .24 | .26 | .28 | .30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .839926 | .821800 | .803340 | .784559 | .765470 | .746089 |
| 92 | .832027 | .813046 | .793725 | .774077 | .754117 | .733862 |
| 94 | .823874 | .804016 | .783810 | .763273 | .742421 | .721271 |
| 96 | .815460 | .794700 | .773586 | .752137 | .730371 | .708306 |
| 98 | .806776 | .785089 | .763044 | .740660 | .717958 | .694956 |
| 100 | .797813 | .775173 | .752172 | .728830 | .705169 | .681209 |
| 102 | .788560 | .764942 | .740960 | .716635 | .691992 | .667053 |
| 104 | .779007 | .754384 | .729394 | .704062 | .678414 | .652473 |
| 106 | .769142 | .743485 | .717461 | .691097 | .664419 | .637454 |
| 108 | .758951 | .732232 | .705147 | .677724 | .649991 | .621979 |
| 110 | .748421 | .720610 | .692435 | .663926 | .635114 | .606031 |
| 112 | .737536 | .708603 | .679308 | .649685 | .619767 | .589588 |
| 114 | .726279 | .696191 | .665746 | .634981 | .603930 | .572630 |
| 116 | .714631 | .683355 | .651729 | .619790 | .587578 | .555132 |
| 118 | .702572 | .670073 | .637232 | .604089 | .570687 | .537067 |
| | | | | | | |
| 120 | .690080 | .656321 | .622230 | .587851 | .553228 | .518406 |
| 122 | .677130 | .642072 | .606695 | .571044 | .535169 | .499116 |
| 124 | .663694 | .627297 | .590594 | .553636 | .516475 | .479160 |
| 126 | .649741 | .611961 | .573893 | .535590 | .497107 | .458499 |
| 128 | .635237 | .596029 | .556552 | .516863 | .477022 | .437085 |
| 130 | .620144 | .579459 | .538527 | .497410 | .456170 | .414869 |
| 132 | .604417 | .562203 | .519767 | .477176 | .434495 | .391792 |
| 134 | .588009 | .544209 | .500216 | .456102 | .411935 | .367789 |
| 136 | .570862 | .525417 | .479811 | .434120 | .388419 | .342784 |
| 138 | .552914 | .505757 | .458476 | .411151 | .363863 | .316692 |
| 140 | .534091 | .485152 | .436128 | .387107 | .338174 | .289415 |
| 142 | .514309 | .463508 | .412668 | .361883 | .311242 | .260838 |
| 144 | .493468 | .440719 | .387983 | .335357 | .282940 | .230827 |
| 146 | .471452 | .416660 | .361937 | .307388 | .253116 | .199225 |
| 148 | .448124 | .391182 | .334372 | .277805 | .221594 | .165846 |
| | | | | | | |
| 150 | .423320 | .364107 | .305096 | .246407 | .188158 | .130466 |
| 152 | .396840 | .335219 | .273880 | .212948 | .152552 | .092815 |
| 154 | .368441 | .304255 | .240439 | .177128 | .114457 | .052559 |
| 156 | .337819 | .270887 | .204423 | .138572 | .073479 | .009285 |
| 158 | .304592 | .234700 | .165387 | .096809 | .029120 | -.037528 |
| 160 | .268267 | .195159 | .122757 | .051227 | -.019264 | -.088557 |
| 162 | .228193 | .151561 | .075778 | .001023 | -.072524 | -.144693 |
| 164 | .183488 | .102949 | .023423 | -.054893 | -.131811 | -.207144 |
| 166 | .132914 | .047981 | -.035746 | -.118056 | -.198745 | -.277609 |
| 168 | .074655 | -.015310 | -.103844 | -.190715 | -.275700 | -.358582 |
| 170 | .005894 | -.089981 | -.184149 | -.276358 | -.366365 | -.453931 |
| 172 | -.078093 | -.181152 | -.282160 | -.380842 | -.476926 | -.570152 |
| 174 | -.186170 | -.298432 | -.408196 | -.515150 | -.618993 | -.719432 |
| 176 | -.338245 | -.463409 | -.585436 | -.703967 | -.818652 | -.929158 |
| 178 | -.597869 | -.745000 | -.887891 | -1.026099 | -1.159199 | -1.286784 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos\theta)$$

| $\nu$ | .30 | .32 | .34 | .36 | .38 | .40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999881 | .999871 | .999861 | .999850 | .999840 | .999829 |
| 4 | .999524 | .999485 | .999444 | .999403 | .999361 | .999317 |
| 6 | .998930 | .998841 | .998750 | .998657 | .998562 | .998464 |
| 8 | .998098 | .997940 | .997778 | .997613 | .997443 | .997270 |
| 10 | .997028 | .996781 | .996529 | .996270 | .996005 | .995734 |
| 12 | .995719 | .995364 | .995000 | .994628 | .994247 | .993857 |
| 14 | .994172 | .993689 | .993194 | .992687 | .992168 | .991638 |
| 16 | .992386 | .991755 | .991108 | .990446 | .989769 | .989076 |
| 18 | .990360 | .989561 | .988743 | .987906 | .987049 | .986173 |
| 20 | .988094 | .987108 | .986099 | .985065 | .984008 | .982927 |
| 22 | .985587 | .984395 | .983173 | .981924 | .980645 | .979338 |
| 24 | .982839 | .981421 | .979967 | .978481 | .976960 | .975405 |
| 26 | .979849 | .978184 | .976480 | .974736 | .972952 | .971129 |
| 28 | .976616 | .974686 | .972710 | .970688 | .968621 | .966509 |
| 30 | .973139 | .970924 | .968657 | .966337 | .963966 | .961544 |
| 32 | .969417 | .966898 | .964319 | .961682 | .958987 | .956233 |
| 34 | .965450 | .962606 | .959697 | .956722 | .953681 | .950576 |
| 36 | .961235 | .958048 | .954788 | .951455 | .948050 | .944572 |
| 38 | .956772 | .953223 | .949592 | .945882 | .942091 | .938221 |
| 40 | .952059 | .948128 | .944108 | .939999 | .935803 | .931520 |
| 42 | .947095 | .942763 | .938333 | .933808 | .929187 | .924471 |
| 44 | .941878 | .937126 | .932268 | .927305 | .922239 | .917070 |
| 46 | .936407 | .931215 | .925909 | .920490 | .914959 | .909318 |
| 48 | .930680 | .925029 | .919255 | .913360 | .907346 | .901212 |
| 50 | .924694 | .918565 | .912305 | .905915 | .899397 | .892752 |
| 52 | .918448 | .911822 | .905056 | .898152 | .891111 | .883935 |
| 54 | .911940 | .904798 | .897507 | .890070 | .882487 | .874761 |
| 56 | .905166 | .897489 | .889655 | .881665 | .873521 | .865227 |
| 58 | .898125 | .889895 | .881497 | .872936 | .864213 | .855331 |
| 60 | .890814 | .882010 | .873032 | .863880 | .854559 | .845072 |
| 62 | .883229 | .873834 | .864255 | .854495 | .844557 | .834446 |
| 64 | .875368 | .865362 | .855164 | .844777 | .834205 | .823452 |
| 66 | .867228 | .856592 | .845756 | .834723 | .823498 | .812086 |
| 68 | .858803 | .847520 | .836027 | .824331 | .812435 | .800345 |
| 70 | .850092 | .838141 | .825974 | .813595 | .801011 | .788227 |
| 72 | .841089 | .828452 | .815592 | .802513 | .789223 | .775727 |
| 74 | .831790 | .818449 | .804876 | .791080 | .777066 | .762841 |
| 76 | .822191 | .808126 | .793823 | .779291 | .764536 | .749566 |
| 78 | .812285 | .797478 | .782427 | .767141 | .751628 | .735897 |
| 80 | .802068 | .786499 | .770682 | .754625 | .738337 | .721829 |
| 82 | .791534 | .775185 | .758582 | .741736 | .724657 | .707355 |
| 84 | .780676 | .763528 | .746122 | .728470 | .710583 | .692471 |
| 86 | .769488 | .751521 | .733294 | .714818 | .696106 | .677170 |
| 88 | .757961 | .739158 | .720091 | .700774 | .681221 | .661445 |
| 90 | .746089 | .726429 | .706504 | .686329 | .665918 | .645287 |

30

$$P_\nu(\cos\theta)$$

| $\nu$ | .30 | .32 | .34 | .36 | .38 | .40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .746089 | .726428 | .706504 | .686328 | .665918 | .645287 |
| 92 | .733862 | .713326 | .692524 | .671474 | .650190 | .628689 |
| 94 | .721271 | .699839 | .678143 | .656200 | .634027 | .611642 |
| 96 | .708306 | .685959 | .663350 | .640497 | .617419 | .594135 |
| 98 | .694956 | .671674 | .648134 | .624353 | .600355 | .576158 |
| 100 | .681209 | .656973 | .632481 | .607757 | .582822 | .557698 |
| 102 | .667053 | .641841 | .616380 | .590694 | .564807 | .538742 |
| 104 | .652473 | .626265 | .599816 | .573151 | .546295 | .519276 |
| 106 | .637454 | .610229 | .582772 | .555110 | .527271 | .499284 |
| 108 | .621979 | .593716 | .565231 | .536555 | .507717 | .478748 |
| 110 | .606031 | .576707 | .547175 | .517467 | .487614 | .457649 |
| 112 | .589588 | .559182 | .528582 | .497823 | .466940 | .435966 |
| 114 | .572630 | .541118 | .509429 | .477602 | .445671 | .413675 |
| 116 | .555132 | .522490 | .489691 | .456776 | .423783 | .390751 |
| 118 | .537067 | .503271 | .469340 | .435317 | .401245 | .367164 |
| | | | | | | |
| 120 | .518406 | .483430 | .448345 | .413195 | .378026 | .342881 |
| 122 | .499116 | .462934 | .426670 | .390373 | .354090 | .317868 |
| 124 | .479160 | .441744 | .404277 | .366811 | .329397 | .292084 |
| 126 | .458499 | .419820 | .381124 | .342467 | .303902 | .265483 |
| 128 | .437085 | .397113 | .357162 | .317290 | .277556 | .238016 |
| 130 | .414869 | .373570 | .332335 | .291225 | .250301 | .209624 |
| 132 | .391792 | .349133 | .306583 | .264208 | .222073 | .180242 |
| 134 | .367789 | .323732 | .279835 | .236168 | .192799 | .149797 |
| 136 | .342784 | .297290 | .252012 | .207023 | .162396 | .118203 |
| 138 | .316692 | .269719 | .223021 | .176678 | .130767 | .085364 |
| 140 | .289415 | .240915 | .192758 | .145026 | .097802 | .051166 |
| 142 | .260838 | .210760 | .161098 | .111940 | .063371 | .015479 |
| 144 | .230827 | .179116 | .127899 | .077272 | .027325 | -.021851 |
| 146 | .199225 | .145817 | .092992 | .040849 | -.010514 | -.061004 |
| 148 | .165846 | .110672 | .056177 | .002465 | -.050359 | -.102197 |
| | | | | | | |
| 150 | .130466 | .073446 | .017211 | -.038127 | -.092462 | -.145687 |
| 152 | .092815 | .033859 | -.024195 | -.081230 | -.137132 | -.191789 |
| 154 | .052559 | -.008436 | -.068402 | -.127212 | -.184747 | -.240887 |
| 156 | .009285 | -.053870 | -.115854 | -.176533 | -.235777 | -.293464 |
| 158 | -.037528 | -.102989 | -.167117 | -.229773 | -.290821 | -.350129 |
| 160 | -.088557 | -.156494 | -.222919 | -.287686 | -.350648 | -.411669 |
| 162 | -.144693 | -.215314 | -.284224 | -.351263 | -.416279 | -.479124 |
| 164 | -.207144 | -.280711 | -.352337 | -.421853 | -.489096 | -.553910 |
| 166 | -.277609 | -.354457 | -.429098 | -.501353 | -.571047 | -.638016 |
| 168 | -.358582 | -.439150 | -.517203 | -.592545 | -.664990 | -.734363 |
| 170 | -.453931 | -.538830 | -.620840 | -.699752 | -.775366 | -.847492 |
| 172 | -.570152 | -.660270 | -.747040 | -.830231 | -.909627 | -.985024 |
| 174 | -.719432 | -.816190 | -.908998 | -.997605 | -1.081771 | -1.161274 |
| 176 | -.929158 | -1.035167 | -1.136374 | -1.232494 | -1.323258 | -1.408417 |
| 178 | -1.286784 | -1.408468 | -1.523885 | -1.632694 | -1.734575 | -1.829235 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ | .40 | .42 | .44 | .46 | .48 | .50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999829 | .999818 | .999807 | .999795 | .999783 | .999771 |
| 4 | .999317 | .999273 | .999227 | .999181 | .999134 | .999086 |
| 6 | .998464 | .998364 | .998262 | .998158 | .998052 | .997944 |
| 8 | .997270 | .997093 | .996911 | .996726 | .996537 | .996345 |
| 10 | .995734 | .995457 | .995174 | .994885 | .994590 | .994289 |
| 12 | .993857 | .993458 | .993051 | .992635 | .992210 | .991777 |
| 14 | .991638 | .991095 | .990541 | .989975 | .989398 | .988808 |
| 16 | .989076 | .988368 | .987645 | .986907 | .986153 | .985384 |
| 18 | .986173 | .985277 | .984363 | .983429 | .982476 | .981503 |
| 20 | .982927 | .981822 | .980694 | .979542 | .978366 | .977167 |
| 22 | .979338 | .978002 | .976638 | .975246 | .973825 | .972376 |
| 24 | .975405 | .973817 | .972196 | .970540 | .968852 | .967130 |
| 26 | .971129 | .969267 | .967366 | .965426 | .963447 | .961429 |
| 28 | .966509 | .964351 | .962149 | .959902 | .957610 | .955274 |
| 30 | .961544 | .959070 | .956544 | .953968 | .951342 | .948664 |
| 32 | .956233 | .953421 | .950552 | .947625 | .944642 | .941601 |
| 34 | .950576 | .947406 | .944171 | .940873 | .937511 | .934085 |
| 36 | .944572 | .941023 | .937402 | .933710 | .929948 | .926116 |
| 38 | .938221 | .934271 | .930243 | .926138 | .921955 | .917694 |
| 40 | .931520 | .927151 | .922695 | .918155 | .913529 | .908820 |
| 42 | .924471 | .919660 | .914757 | .909761 | .904673 | .899495 |
| 44 | .917070 | .911799 | .906428 | .900956 | .895385 | .889717 |
| 46 | .909318 | .903566 | .897707 | .891740 | .885666 | .879488 |
| 48 | .901212 | .894961 | .888593 | .882111 | .875515 | .868807 |
| 50 | .892752 | .885981 | .879087 | .872070 | .864932 | .857676 |
| 52 | .883935 | .876626 | .869185 | .861615 | .853917 | .846093 |
| 54 | .874761 | .866894 | .858888 | .850746 | .842469 | .834059 |
| 56 | .865227 | .856784 | .848195 | .839462 | .830587 | .821574 |
| 58 | .855331 | .846294 | .837103 | .827761 | .818271 | .808637 |
| 60 | .845072 | .835421 | .825610 | .815642 | .805521 | .795249 |
| 62 | .834446 | .824165 | .813716 | .803105 | .792334 | .781408 |
| 64 | .823452 | .812522 | .801419 | .790147 | .778710 | .767113 |
| 66 | .812086 | .800490 | .788715 | .776766 | .764648 | .752366 |
| 68 | .800345 | .788066 | .775603 | .762962 | .750146 | .737163 |
| 70 | .788227 | .775248 | .762080 | .748730 | .735203 | .721504 |
| 72 | .775727 | .762032 | .748144 | .734069 | .719815 | .705388 |
| 74 | .762841 | .748414 | .733790 | .718977 | .703982 | .688812 |
| 76 | .749566 | .734390 | .719015 | .703449 | .687699 | .671776 |
| 78 | .735897 | .719957 | .703815 | .687482 | .670966 | .654275 |
| 80 | .721829 | .705109 | .688187 | .671073 | .653777 | .636308 |
| 82 | .707355 | .689841 | .672125 | .654217 | .636129 | .617872 |
| 84 | .692471 | .674148 | .655623 | .636910 | .618019 | .598963 |
| 86 | .677170 | .658023 | .638677 | .619145 | .599441 | .579576 |
| 88 | .661445 | .641460 | .621280 | .600918 | .580389 | .559708 |
| 90 | .645287 | .624451 | .603424 | .582222 | .560859 | .539352 |

$$P_\nu(\cos \theta)$$

| ν θ | .40 | .42 | .44 | .46 | .48 | .50 |
|---|---|---|---|---|---|---|
| 90 | .645287 | .624451 | .603424 | .582221 | .560859 | .539352 |
| 92 | .628689 | .606988 | .585102 | .563048 | .540843 | .518504 |
| 94 | .611642 | .589063 | .566306 | .543391 | .520335 | .497156 |
| 96 | .594135 | .570665 | .547026 | .523240 | .499325 | .475301 |
| 98 | .576158 | .551784 | .527253 | .502586 | .477805 | .452930 |
| 100 | .557698 | .532408 | .506973 | .481418 | .455764 | .430034 |
| 102 | .538742 | .512524 | .486176 | .459724 | .433192 | .406603 |
| 104 | .519276 | .492118 | .464848 | .437491 | .410075 | .382624 |
| 106 | .499284 | .471174 | .442972 | .414704 | .386399 | .358084 |
| 108 | .478748 | .449676 | .420532 | .391346 | .362148 | .332968 |
| 110 | .457649 | .427604 | .397510 | .367400 | .337306 | .307260 |
| 112 | .435966 | .404936 | .373884 | .342845 | .311852 | .280940 |
| 114 | .413675 | .381650 | .349632 | .317658 | .285765 | .253988 |
| 116 | .390751 | .357720 | .324728 | .291815 | .259019 | .226379 |
| 118 | .367164 | .333116 | .299143 | .265287 | .231588 | .198088 |
| 120 | .342881 | .307807 | .272846 | .238043 | .203441 | .169083 |
| 122 | .317868 | .281756 | .245800 | .210047 | .174542 | .139332 |
| 124 | .292084 | .254924 | .217966 | .181259 | .144853 | .108796 |
| 126 | .265483 | .227264 | .189297 | .151635 | .114329 | .077431 |
| 128 | .238016 | .198727 | .159745 | .121125 | .082921 | .045188 |
| 130 | .209624 | .169254 | .129249 | .089669 | .050571 | .012012 |
| 132 | .180242 | .138779 | .097745 | .057204 | .017215 | -.022161 |
| 134 | .149797 | .107228 | .065159 | .023654 | -.017221 | -.057406 |
| 136 | .118203 | .074516 | .031403 | -.011065 | -.052824 | -.093807 |
| 138 | .085364 | .040543 | -.003620 | -.047055 | -.089692 | -.131462 |
| 140 | .051166 | .005197 | -.040026 | -.084430 | -.127939 | -.170483 |
| 142 | .015479 | -.031655 | -.077948 | -.123322 | -.167699 | -.211004 |
| 144 | -.021851 | -.070169 | -.117543 | -.163890 | -.209129 | -.253180 |
| 146 | -.061004 | -.110528 | -.158996 | -.206319 | -.252414 | -.297197 |
| 148 | -.102197 | -.152951 | -.202526 | -.250830 | -.297775 | -.343276 |
| 150 | -.145687 | -.197699 | -.248399 | -.297691 | -.345481 | -.391682 |
| 152 | -.191789 | -.245092 | -.296937 | -.347224 | -.395855 | -.442739 |
| 154 | -.240887 | -.295520 | -.348536 | -.399829 | -.449298 | -.496847 |
| 156 | -.293464 | -.349474 | -.403690 | -.456003 | -.506308 | -.554505 |
| 158 | -.350129 | -.407571 | -.463027 | -.516380 | -.567521 | -.616347 |
| 160 | -.411669 | -.470613 | -.527356 | -.581775 | -.633756 | -.683192 |
| 162 | -.479124 | -.539659 | -.597750 | -.653269 | -.706099 | -.756128 |
| 164 | -.553910 | -.616147 | -.675666 | -.732334 | -.786029 | -.836633 |
| 166 | -.638016 | -.702101 | -.763156 | -.821040 | -.875624 | -.926789 |
| 168 | -.734363 | -.800496 | -.863233 | -.922427 | -.977943 | -1.029657 |
| 170 | -.847492 | -.915953 | -.980582 | -1.041224 | -1.097740 | -1.149999 |
| 172 | -.985024 | -1.056231 | -1.123069 | -1.185376 | -1.243002 | -1.295815 |
| 174 | -1.161274 | -1.235904 | -1.305472 | -1.369802 | -1.428737 | -1.482138 |
| 176 | -1.408417 | -1.487739 | -1.561016 | -1.628056 | -1.688692 | -1.742778 |
| 178 | -1.829235 | -1.916405 | -1.995845 | -2.067339 | -2.130701 | -2.185774 |
| 180 | -∞ | -∞ | -∞ | -∞ | -∞ | -∞ |

$$P_\nu(\cos\theta)$$

| $\nu$ | .50 | .52 | .54 | .56 | .58 | .60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999771 | .999759 | .999746 | .999733 | .999720 | .999707 |
| 4 | .999086 | .999037 | .998986 | .998935 | .998883 | .998830 |
| 6 | .997944 | .997833 | .997720 | .997605 | .997488 | .997368 |
| 8 | .996345 | .996148 | .995947 | .995743 | .995535 | .995322 |
| 10 | .994289 | .993982 | .993669 | .993349 | .993024 | .992693 |
| 12 | .991777 | .991335 | .990884 | .990425 | .989957 | .989480 |
| 14 | .988808 | .988207 | .987594 | .986970 | .986334 | .985686 |
| 16 | .985384 | .984600 | .983800 | .982985 | .982156 | .981311 |
| 18 | .981503 | .980512 | .979501 | .978472 | .977423 | .976355 |
| 20 | .977167 | .975945 | .974699 | .973430 | .972137 | .970821 |
| 22 | .972376 | .970899 | .969394 | .967860 | .966299 | .964710 |
| 24 | .967130 | .965375 | .963586 | .961765 | .959911 | .958023 |
| 26 | .961429 | .959372 | .957277 | .955144 | .952973 | .950763 |
| 28 | .955274 | .952893 | .950468 | .947999 | .945486 | .942930 |
| 30 | .948664 | .945937 | .943159 | .940331 | .937454 | .934528 |
| 32 | .941601 | .938504 | .935351 | .932142 | .928877 | .925557 |
| 34 | .934085 | .930597 | .927046 | .923433 | .919758 | .916021 |
| 36 | .926116 | .922214 | .918244 | .914204 | .910097 | .905921 |
| 38 | .917694 | .913358 | .908946 | .904459 | .899897 | .895261 |
| 40 | .908820 | .904028 | .899154 | .894197 | .889160 | .884042 |
| 42 | .899495 | .894226 | .888868 | .883421 | .877888 | .872267 |
| 44 | .889717 | .883951 | .878090 | .872133 | .866083 | .859939 |
| 46 | .879488 | .873205 | .866820 | .860334 | .853747 | .847061 |
| 48 | .868807 | .861989 | .855061 | .848025 | .840883 | .833635 |
| 50 | .857676 | .850302 | .842812 | .835208 | .827492 | .819665 |
| 52 | .846093 | .838145 | .830075 | .821885 | .813577 | .805153 |
| 54 | .834059 | .825519 | .816851 | .808058 | .799141 | .790103 |
| 56 | .821574 | .812424 | .803141 | .793727 | .784185 | .774516 |
| 58 | .808637 | .798861 | .788946 | .778895 | .768711 | .758398 |
| 60 | .795249 | .784829 | .774266 | .763563 | .752722 | .741749 |
| 62 | .781408 | .770329 | .759102 | .747732 | .736221 | .724573 |
| 64 | .767113 | .755360 | .743455 | .731403 | .719208 | .706874 |
| 66 | .752366 | .739923 | .727326 | .714578 | .701686 | .688653 |
| 68 | .737163 | .724017 | .710713 | .697258 | .683656 | .669914 |
| 70 | .721504 | .707641 | .693618 | .679443 | .665122 | .650660 |
| 72 | .705388 | .690794 | .676041 | .661135 | .646083 | .630892 |
| 74 | .688812 | .673476 | .657981 | .642333 | .626542 | .610613 |
| 76 | .671776 | .655685 | .639437 | .623038 | .606499 | .589826 |
| 78 | .654275 | .637420 | .620408 | .603250 | .585955 | .568532 |
| 80 | .636308 | .618677 | .600894 | .582969 | .564911 | .546732 |
| 82 | .617872 | .599456 | .580893 | .562193 | .543368 | .524429 |
| 84 | .598963 | .579753 | .560402 | .540922 | .521325 | .501623 |
| 86 | .579576 | .559565 | .539420 | .519154 | .498781 | .478315 |
| 88 | .559708 | .538887 | .517942 | .496887 | .475736 | .454504 |
| 90 | .539352 | .517716 | .495967 | .474119 | .452189 | .430192 |

34

$$P_\nu(\cos\theta)$$

| $\nu$ | .50 | .52 | .54 | .56 | .58 | .60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .539352 | .517716 | .495966 | .474118 | .452188 | .430191 |
| 92 | .518504 | .496046 | .473488 | .450845 | .428135 | .405375 |
| 94 | .497156 | .473872 | .450502 | .427064 | .403575 | .380055 |
| 96 | .475301 | .451187 | .427003 | .402768 | .378503 | .354227 |
| 98 | .452930 | .427983 | .402984 | .377954 | .352916 | .327889 |
| 100 | .430034 | .404251 | .378437 | .352615 | .326807 | .301037 |
| 102 | .406603 | .379982 | .353354 | .326743 | .300172 | .273666 |
| 104 | .382624 | .355165 | .327725 | .300328 | .273001 | .245769 |
| 106 | .358084 | .329788 | .301538 | .273362 | .245287 | .217340 |
| 108 | .332968 | .303836 | .274780 | .245831 | .217018 | .188369 |
| 110 | .307260 | .277293 | .247438 | .217724 | .188183 | .158847 |
| 112 | .280940 | .250143 | .219493 | .189023 | .158768 | .128759 |
| 114 | .253988 | .222363 | .190926 | .159713 | .128756 | .098092 |
| 116 | .226379 | .193933 | .161718 | .129771 | .098130 | .066829 |
| 118 | .198088 | .164826 | .131842 | .099176 | .066866 | .034951 |
| | | | | | | |
| 120 | .169083 | .135013 | .101272 | .067901 | .034941 | .002433 |
| 122 | .139332 | .104462 | .069975 | .035916 | .002327 | -.030748 |
| 124 | .108796 | .073134 | .037916 | .003187 | -.031008 | -.064627 |
| 126 | .077431 | .040989 | .005054 | -.030325 | -.065104 | -.099236 |
| 128 | .045188 | .007978 | -.028656 | -.064667 | -.100003 | -.134617 |
| 130 | .012012 | -.025953 | -.063271 | -.099888 | -.135753 | -.170817 |
| 132 | -.022161 | -.060869 | -.098850 | -.136049 | -.172413 | -.207891 |
| 134 | -.057406 | -.096840 | -.135463 | -.173218 | -.210049 | -.245902 |
| 136 | -.093807 | -.133951 | -.173193 | -.211475 | -.248737 | -.284924 |
| 138 | -.131462 | -.172297 | -.212135 | -.250911 | -.288567 | -.325044 |
| 140 | -.170483 | -.211991 | -.252397 | -.291635 | -.329644 | -.366363 |
| 142 | -.211004 | -.253164 | -.294109 | -.333773 | -.372091 | -.409001 |
| 144 | -.253180 | -.295970 | -.337424 | -.377474 | -.416054 | -.453099 |
| 146 | -.297197 | -.340592 | -.382522 | -.422916 | -.461706 | -.498827 |
| 148 | -.343276 | -.387250 | -.429620 | -.470312 | -.509256 | -.546386 |
| | | | | | | |
| 150 | -.391682 | -.436208 | -.478979 | -.519919 | -.558956 | -.596023 |
| 152 | -.442739 | -.487787 | -.530917 | -.572051 | -.611114 | -.648039 |
| 154 | -.496847 | -.542386 | -.585828 | -.627095 | -.666110 | -.702805 |
| 156 | -.554505 | -.600500 | -.644204 | -.685536 | -.724420 | -.760787 |
| 158 | -.616346 | -.662760 | -.706670 | -.747994 | -.786654 | -.822581 |
| 160 | -.683192 | -.729984 | -.774037 | -.815267 | -.853597 | -.888957 |
| 162 | -.756128 | -.803253 | -.847378 | -.888418 | -.926294 | -.960939 |
| 164 | -.836633 | -.884042 | -.928157 | -.968893 | -1.006171 | -1.039923 |
| 166 | -.926789 | -.974426 | -1.018435 | -1.058730 | -1.095233 | -1.127879 |
| 168 | -1.029657 | -1.077458 | -1.121245 | -1.160930 | -1.196438 | -1.227706 |
| 170 | -1.149999 | -1.197888 | -1.241304 | -1.280161 | -1.314385 | -1.343918 |
| 172 | -1.295815 | -1.343697 | -1.386545 | -1.424273 | -1.456813 | -1.484109 |
| 174 | -1.482138 | -1.529884 | -1.571873 | -1.608021 | -1.638264 | -1.662558 |
| 176 | -1.742778 | -1.790188 | -1.830823 | -1.864602 | -1.891471 | -1.911396 |
| 178 | -2.185774 | -2.232430 | -2.270569 | -2.300122 | -2.321050 | -2.333342 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ | .60 | .62 | .64 | .66 | .68 | .70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999707 | .999694 | .999680 | .999666 | .999652 | .999637 |
| 4 | .998830 | .998776 | .998721 | .998665 | .998608 | .998550 |
| 6 | .997368 | .997247 | .997123 | .996997 | .996869 | .996738 |
| 8 | .995322 | .995106 | .994886 | .994663 | .994435 | .994203 |
| 10 | .992693 | .992356 | .992012 | .991663 | .991308 | .990946 |
| 12 | .989480 | .988995 | .988501 | .987999 | .987488 | .986968 |
| 14 | .985686 | .985027 | .984355 | .983672 | .982978 | .982272 |
| 16 | .981311 | .980450 | .979575 | .978685 | .977779 | .976859 |
| 18 | .976355 | .975268 | .974163 | .973038 | .971894 | .970732 |
| 20 | .970821 | .969482 | .968120 | .966734 | .965326 | .963894 |
| 22 | .964710 | .963093 | .961448 | .959776 | .958076 | .956348 |
| 24 | .958023 | .956103 | .954151 | .952166 | .950148 | .948098 |
| 26 | .950763 | .948515 | .946230 | .943906 | .941546 | .939148 |
| 28 | .942930 | .940331 | .937688 | .935002 | .932273 | .929501 |
| 30 | .934528 | .931552 | .928527 | .925454 | .922333 | .919163 |
| 32 | .925557 | .922182 | .918752 | .915268 | .911730 | .908138 |
| 34 | .916021 | .912223 | .908365 | .904447 | .900468 | .896431 |
| 36 | .905921 | .901679 | .897370 | .892995 | .888554 | .884047 |
| 38 | .895261 | .890552 | .885770 | .880916 | .875990 | .870993 |
| 40 | .884042 | .878845 | .873568 | .868214 | .862783 | .857275 |
| 42 | .872267 | .866561 | .860770 | .854895 | .848937 | .842897 |
| 44 | .859939 | .853704 | .847378 | .840963 | .834459 | .827868 |
| 46 | .847061 | .840278 | .833398 | .826423 | .819354 | .812193 |
| 48 | .833635 | .826285 | .818832 | .811280 | .803628 | .795880 |
| 50 | .819665 | .811730 | .803687 | .795539 | .787288 | .778935 |
| 52 | .805153 | .796615 | .787966 | .779206 | .770339 | .761366 |
| 54 | .790103 | .780946 | .771673 | .762286 | .752788 | .743181 |
| 56 | .774516 | .764725 | .754814 | .744786 | .734642 | .724388 |
| 58 | .758398 | .747957 | .737394 | .726709 | .715908 | .704993 |
| 60 | .741749 | .730645 | .719416 | .708064 | .696593 | .685006 |
| 62 | .724573 | .712794 | .700886 | .688854 | .676702 | .664435 |
| 64 | .706874 | .694406 | .681809 | .669087 | .656245 | .643287 |
| 66 | .688653 | .675486 | .662189 | .648767 | .635226 | .621571 |
| 68 | .669914 | .656038 | .642031 | .627902 | .613655 | .599296 |
| 70 | .650660 | .636064 | .621341 | .606496 | .591537 | .576470 |
| 72 | .630892 | .615569 | .600122 | .584557 | .568881 | .553102 |
| 74 | .610613 | .594557 | .578379 | .562088 | .545693 | .529200 |
| 76 | .589826 | .573029 | .556117 | .539097 | .521980 | .504772 |
| 78 | .568532 | .550990 | .533339 | .515589 | .497748 | .479827 |
| 80 | .546732 | .528442 | .510050 | .491568 | .473006 | .454374 |
| 82 | .524429 | .505387 | .486254 | .467041 | .447759 | .428420 |
| 84 | .501623 | .481828 | .461954 | .442012 | .422014 | .401973 |
| 86 | .478315 | .457767 | .437153 | .416485 | .395777 | .375041 |
| 88 | .454504 | .433205 | .411854 | .390465 | .369053 | .347632 |
| 90 | .430192 | .408143 | .386060 | .363956 | .341849 | .319752 |

$$P_\nu(\cos\theta)$$

| $\nu$ | .60 | .62 | .64 | .66 | .68 | .70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .430191 | .408143 | .386059 | .363956 | .341848 | .319752 |
| 92 | .405375 | .382582 | .359771 | .336961 | .314168 | .291408 |
| 94 | .380055 | .356520 | .332990 | .309483 | .286016 | .262608 |
| 96 | .354227 | .329958 | .305718 | .281524 | .257397 | .233355 |
| 98 | .327889 | .302894 | .277953 | .253086 | .228314 | .203656 |
| 100 | .301037 | .275325 | .249695 | .224169 | .198769 | .173515 |
| 102 | .273666 | .247248 | .220943 | .194774 | .168763 | .142935 |
| 104 | .245769 | .218658 | .191693 | .164898 | .138299 | .111920 |
| 106 | .217340 | .189549 | .161940 | .134540 | .107375 | .080470 |
| 108 | .188369 | .159914 | .131680 | .103696 | .075989 | .048587 |
| 110 | .158847 | .129744 | .100906 | .072361 | .044139 | .016268 |
| 112 | .128759 | .099028 | .069607 | .040528 | .011820 | -.016486 |
| 114 | .098092 | .067754 | .037775 | .008188 | -.020975 | -.049682 |
| 116 | .066829 | .035906 | .005395 | -.024669 | -.054254 | -.083327 |
| 118 | .034951 | .003467 | -.027547 | -.058058 | -.088029 | -.117427 |
| 120 | .002433 | -.029583 | -.061072 | -.091994 | -.122313 | -.151994 |
| 122 | -.030748 | -.063271 | -.095201 | -.126498 | -.157124 | -.187043 |
| 124 | -.064627 | -.097624 | -.129959 | -.161592 | -.192481 | -.222591 |
| 126 | -.099236 | -.132675 | -.165378 | -.197304 | -.228410 | -.258659 |
| 128 | -.134617 | -.168462 | -.201493 | -.233666 | -.264940 | -.295274 |
| 130 | -.170817 | -.205030 | -.238345 | -.270719 | -.302107 | -.332468 |
| 132 | -.207891 | -.242430 | -.275984 | -.308507 | -.339952 | -.370279 |
| 134 | -.245902 | -.280724 | -.314467 | -.347083 | -.378525 | -.408752 |
| 136 | -.284924 | -.319982 | -.353861 | -.386511 | -.417886 | -.447942 |
| 138 | -.325044 | -.360288 | -.394245 | -.426866 | -.458104 | -.487914 |
| 140 | -.366363 | -.401737 | -.435712 | -.468236 | -.499262 | -.528745 |
| 142 | -.409001 | -.444447 | -.478372 | -.510726 | -.541459 | -.570529 |
| 144 | -.453099 | -.488553 | -.522357 | -.554461 | -.584816 | -.613377 |
| 146 | -.498827 | -.534219 | -.567825 | -.599592 | -.629474 | -.657425 |
| 148 | -.546386 | -.581641 | -.614963 | -.646301 | -.675606 | -.702835 |
| 150 | -.596023 | -.631059 | -.664004 | -.694808 | -.723424 | -.749809 |
| 152 | -.648039 | -.682763 | -.715229 | -.745386 | -.773187 | -.798592 |
| 154 | -.702805 | -.737117 | -.768989 | -.798371 | -.825218 | -.849493 |
| 156 | -.760787 | -.794573 | -.825723 | -.854188 | -.879924 | -.902897 |
| 158 | -.822581 | -.855712 | -.885994 | -.913378 | -.937825 | -.959302 |
| 160 | -.888957 | -.921286 | -.950530 | -.976646 | -.999596 | -1.019354 |
| 162 | -.960939 | -.992292 | -1.020302 | -1.044929 | -1.066140 | -1.083913 |
| 164 | -1.039923 | -1.070093 | -1.096633 | -1.119506 | -1.138686 | -1.154156 |
| 166 | -1.127879 | -1.156613 | -1.181392 | -1.202186 | -1.218973 | -1.231747 |
| 168 | -1.227706 | -1.254683 | -1.277333 | -1.295631 | -1.309566 | -1.319139 |
| 170 | -1.343918 | -1.368714 | -1.388745 | -1.403994 | -1.414461 | -1.420160 |
| 172 | -1.484109 | -1.506127 | -1.522845 | -1.534261 | -1.540387 | -1.541253 |
| 174 | -1.662558 | -1.680875 | -1.693210 | -1.699576 | -1.700004 | -1.694546 |
| 176 | -1.911396 | -1.924368 | -1.930402 | -1.929533 | -1.921822 | -1.907350 |
| 178 | -2.333342 | -2.337019 | -2.332131 | -2.318756 | -2.297004 | -2.267011 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

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$$P_\nu(\cos \theta)$$

| $\nu$ | .70 | .72 | .74 | .76 | .78 | .80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999637 | .999622 | .999607 | .999592 | .999577 | .999561 |
| 4 | .998550 | .998491 | .998431 | .998370 | .998308 | .998245 |
| 6 | .996738 | .996606 | .996471 | .996334 | .996195 | .996054 |
| 8 | .994203 | .993968 | .993729 | .993486 | .993239 | .992988 |
| 10 | .990946 | .990579 | .990206 | .989826 | .989441 | .989049 |
| 12 | .986968 | .986440 | .985903 | .985358 | .984804 | .984242 |
| 14 | .982272 | .981554 | .980825 | .980084 | .979332 | .978568 |
| 16 | .976859 | .975923 | .974973 | .974007 | .973027 | .972032 |
| 18 | .970732 | .969551 | .968351 | .967132 | .965894 | .964638 |
| 20 | .963894 | .962439 | .960962 | .959461 | .957938 | .956392 |
| 22 | .956348 | .954593 | .952811 | .951001 | .949164 | .947300 |
| 24 | .948098 | .946016 | .943902 | .941755 | .939577 | .937367 |
| 26 | .939148 | .936712 | .934240 | .931730 | .929184 | .926601 |
| 28 | .929501 | .926687 | .923831 | .920932 | .917992 | .915010 |
| 30 | .919163 | .915945 | .912680 | .909367 | .906008 | .902601 |
| 32 | .908138 | .904492 | .900794 | .897042 | .893239 | .889383 |
| 34 | .896431 | .892334 | .888179 | .883965 | .879694 | .875366 |
| 36 | .884047 | .879477 | .874842 | .870144 | .865382 | .860559 |
| 38 | .870993 | .865927 | .860791 | .855586 | .850312 | .844972 |
| 40 | .857275 | .851691 | .846032 | .840300 | .834494 | .828616 |
| 42 | .842897 | .836776 | .830575 | .824295 | .817937 | .811502 |
| 44 | .827868 | .821190 | .814428 | .807582 | .800653 | .793643 |
| 46 | .812193 | .804941 | .797599 | .790169 | .782652 | .775050 |
| 48 | .795880 | .788035 | .780097 | .772067 | .763946 | .755736 |
| 50 | .778935 | .770482 | .761932 | .753286 | .744546 | .735714 |
| 52 | .761366 | .752290 | .743113 | .733838 | .724465 | .714999 |
| 54 | .743181 | .733468 | .723651 | .713733 | .703716 | .693603 |
| 56 | .724388 | .714024 | .703555 | .692982 | .682310 | .671541 |
| 58 | .704993 | .693968 | .682835 | .671599 | .660262 | .648828 |
| 60 | .685006 | .673309 | .661503 | .649594 | .637585 | .625479 |
| 62 | .664435 | .652056 | .639569 | .626980 | .614292 | .601510 |
| 64 | .643287 | .630219 | .617045 | .603770 | .590398 | .576935 |
| 66 | .621571 | .607808 | .593940 | .579975 | .565917 | .551772 |
| 68 | .599296 | .584832 | .570268 | .555610 | .540864 | .526037 |
| 70 | .576470 | .561302 | .546038 | .530687 | .515253 | .499745 |
| 72 | .553102 | .537227 | .521264 | .505219 | .489100 | .472914 |
| 74 | .529200 | .512618 | .495955 | .479219 | .462418 | .445560 |
| 76 | .504772 | .487484 | .470124 | .452701 | .435224 | .417701 |
| 78 | .479827 | .461836 | .443783 | .425679 | .407533 | .389354 |
| 80 | .454374 | .435683 | .416943 | .398165 | .379359 | .360536 |
| 82 | .428420 | .409035 | .389615 | .370173 | .350718 | .331264 |
| 84 | .401973 | .381901 | .361812 | .341716 | .321626 | .301555 |
| 86 | .375041 | .354292 | .333543 | .312807 | .292097 | .271427 |
| 88 | .347632 | .326216 | .304821 | .283460 | .262147 | .240897 |
| 90 | .319752 | .297683 | .275656 | .253686 | .231790 | .209981 |

$$P_\nu(\cos \theta)$$

| $\nu$ | .70 | .72 | .74 | .76 | .78 | .80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .319752 | .297682 | .275655 | .253686 | .231789 | .209981 |
| 92 | .291408 | .268699 | .246057 | .223499 | .201040 | .178697 |
| 94 | .262608 | .239276 | .216037 | .192911 | .169913 | .147061 |
| 96 | .233355 | .209418 | .185604 | .161933 | .138422 | .115090 |
| 98 | .203656 | .179134 | .154768 | .130577 | .106580 | .082798 |
| 100 | .173515 | .148431 | .123536 | .098853 | .074401 | .050203 |
| 102 | .142935 | .117312 | .091917 | .066772 | .041898 | .017317 |
| 104 | .111920 | .085785 | .059918 | .034342 | .009080 | -.015843 |
| 106 | .080470 | .053852 | .027544 | .001573 | -.024038 | -.049266 |
| 108 | .048587 | .021515 | -.005198 | -.031528 | -.057450 | -.082939 |
| 110 | .016268 | -.011222 | -.038306 | -.064956 | -.091145 | -.116849 |
| 112 | -.016486 | -.044361 | -.071777 | -.098704 | -.125117 | -.150987 |
| 114 | -.049682 | -.077904 | -.105610 | -.132771 | -.159357 | -.185343 |
| 116 | -.083327 | -.111854 | -.139806 | -.167152 | -.193863 | -.219909 |
| 118 | -.117427 | -.146218 | -.174369 | -.201850 | -.228630 | -.254680 |
| 120 | -.151994 | -.181002 | -.209303 | -.236866 | -.263659 | -.289652 |
| 122 | -.187043 | -.216219 | -.244617 | -.272205 | -.298950 | -.324822 |
| 124 | -.222591 | -.251882 | -.280322 | -.307875 | -.334508 | -.360192 |
| 126 | -.258659 | -.288012 | -.316433 | -.343887 | -.370342 | -.395766 |
| 128 | -.295274 | -.324629 | -.352968 | -.380257 | -.406461 | -.431550 |
| 130 | -.332468 | -.361763 | -.389953 | -.417004 | -.442883 | -.467557 |
| 132 | -.370279 | -.399447 | -.427417 | -.454155 | -.479627 | -.503801 |
| 134 | -.408752 | -.437722 | -.465397 | -.491740 | -.516720 | -.540305 |
| 136 | -.447942 | -.476638 | -.503936 | -.529800 | -.554197 | -.577097 |
| 138 | -.487914 | -.516255 | -.543089 | -.568381 | -.592099 | -.614213 |
| 140 | -.528745 | -.556645 | -.582923 | -.607544 | -.630478 | -.651697 |
| 142 | -.570529 | -.597893 | -.623515 | -.647360 | -.669400 | -.689607 |
| 144 | -.613377 | -.640105 | -.664963 | -.687918 | -.708943 | -.728013 |
| 146 | -.657425 | -.683406 | -.707383 | -.729324 | -.749204 | -.767001 |
| 148 | -.702835 | -.727951 | -.750919 | -.771711 | -.790305 | -.806681 |
| 150 | -.749809 | -.773927 | -.795746 | -.815242 | -.832394 | -.847186 |
| 152 | -.798592 | -.821567 | -.842083 | -.860119 | -.875656 | -.888685 |
| 154 | -.849493 | -.871162 | -.890203 | -.906594 | -.920326 | -.931392 |
| 156 | -.902897 | -.923079 | -.940448 | -.954991 | -.966700 | -.975576 |
| 158 | -.959302 | -.977787 | -.993263 | -1.005721 | -1.015160 | -1.021588 |
| 160 | -1.019354 | -1.035901 | -1.049225 | -1.059325 | -1.066207 | -1.069886 |
| 162 | -1.083913 | -1.098236 | -1.109104 | -1.116524 | -1.120510 | -1.121086 |
| 164 | -1.154156 | -1.165912 | -1.173957 | -1.178306 | -1.178986 | -1.176032 |
| 166 | -1.231747 | -1.240510 | -1.245276 | -1.246073 | -1.242938 | -1.235920 |
| 168 | -1.319139 | -1.324364 | -1.325269 | -1.321894 | -1.314290 | -1.302522 |
| 170 | -1.420160 | -1.421118 | -1.417378 | -1.408998 | -1.396046 | -1.378607 |
| 172 | -1.541253 | -1.536904 | -1.527403 | -1.512828 | -1.493272 | -1.468842 |
| 174 | -1.694546 | -1.683270 | -1.666265 | -1.643637 | -1.615510 | -1.582024 |
| 176 | -1.907350 | -1.886221 | -1.858562 | -1.824519 | -1.784261 | -1.737975 |
| 178 | -2.267011 | -2.228941 | -2.182987 | -2.129367 | -2.068326 | -2.000132 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

| $\nu$ | .80 | .82 | .84 | .86 | .88 | .90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999561 | .999545 | .999529 | .999512 | .999496 | .999479 |
| 4 | .998245 | .998182 | .998117 | .998051 | .997984 | .997917 |
| 6 | .996054 | .995910 | .995765 | .995617 | .995467 | .995315 |
| 8 | .992988 | .992733 | .992475 | .992212 | .991946 | .991676 |
| 10 | .989049 | .988652 | .988249 | .987840 | .987424 | .987003 |
| 12 | .984242 | .983671 | .983091 | .982503 | .981906 | .981301 |
| 14 | .978568 | .977792 | .977005 | .976207 | .975396 | .974575 |
| 16 | .972032 | .971021 | .969996 | .968956 | .967901 | .966831 |
| 18 | .964638 | .963363 | .962070 | .960758 | .959427 | .958078 |
| 20 | .956392 | .954823 | .953232 | .951618 | .949981 | .948322 |
| 22 | .947300 | .945409 | .943490 | .941545 | .939573 | .937575 |
| 24 | .937367 | .935125 | .932852 | .930548 | .928212 | .925844 |
| 26 | .926601 | .923982 | .921326 | .918635 | .915907 | .913143 |
| 28 | .915010 | .911987 | .908922 | .905816 | .902670 | .899483 |
| 30 | .902601 | .899148 | .895649 | .892104 | .888513 | .884876 |
| 32 | .889383 | .885476 | .881518 | .877508 | .873448 | .869338 |
| 34 | .875366 | .870981 | .866539 | .862042 | .857489 | .852882 |
| 36 | .860559 | .855673 | .850726 | .845719 | .840651 | .835524 |
| 38 | .844972 | .839564 | .834090 | .828552 | .822948 | .817280 |
| 40 | .828616 | .822666 | .816645 | .810555 | .804396 | .798169 |
| 42 | .811502 | .804991 | .798405 | .791745 | .785012 | .778207 |
| 44 | .793643 | .786552 | .779383 | .772136 | .764813 | .757414 |
| 46 | .775050 | .767364 | .759595 | .751745 | .743816 | .735809 |
| 48 | .755736 | .747439 | .739056 | .730590 | .722042 | .713413 |
| 50 | .735714 | .726793 | .717783 | .708688 | .699508 | .690247 |
| 52 | .714999 | .705440 | .695792 | .686056 | .676235 | .666332 |
| 54 | .693603 | .683396 | .673099 | .662714 | .652244 | .641691 |
| 56 | .671541 | .660678 | .649724 | .638682 | .627555 | .616347 |
| 58 | .648828 | .637300 | .625683 | .613978 | .602191 | .590324 |
| 60 | .625479 | .613281 | .600995 | .588624 | .576173 | .563646 |
| 62 | .601510 | .588637 | .575680 | .562640 | .549525 | .536337 |
| 64 | .576935 | .563386 | .549755 | .536048 | .522269 | .508423 |
| 66 | .551772 | .537545 | .523242 | .508868 | .494429 | .479931 |
| 68 | .526037 | .511133 | .496161 | .481124 | .466030 | .450885 |
| 70 | .499745 | .484168 | .468530 | .452837 | .437096 | .421314 |
| 72 | .472914 | .456669 | .440372 | .424030 | .407652 | .391243 |
| 74 | .445560 | .428654 | .411706 | .394727 | .377722 | .360702 |
| 76 | .417701 | .400142 | .382555 | .364949 | .347334 | .329716 |
| 78 | .389354 | .371153 | .352939 | .334722 | .316511 | .298316 |
| 80 | .360536 | .341706 | .322880 | .304068 | .285280 | .266528 |
| 82 | .331264 | .311820 | .292399 | .273011 | .253668 | .234382 |
| 84 | .301555 | .281515 | .261518 | .241576 | .221701 | .201905 |
| 86 | .271427 | .250810 | .230258 | .209786 | .189405 | .169128 |
| 88 | .240897 | .219724 | .198642 | .177664 | .156806 | .136079 |
| 90 | .209981 | .188277 | .166690 | .145236 | .123930 | .102787 |

$$P_\nu(\cos\theta)$$

| $\nu$ | .80 | .82 | .84 | .86 | .88 | .90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .209981 | .188276 | .166689 | .145236 | .123930 | .102787 |
| 92 | .178697 | .156486 | .134424 | .112525 | .090805 | .069280 |
| 94 | .147061 | .124373 | .101865 | .079554 | .057456 | .035588 |
| 96 | .115090 | .091955 | .069035 | .046348 | .023910 | .001740 |
| 98 | .082798 | .059250 | .035954 | .012929 | -.009806 | -.032235 |
| 100 | .050203 | .026276 | .002642 | -.020679 | -.043670 | -.066312 |
| 102 | .017317 | -.006948 | -.030879 | -.054455 | -.077655 | -.100460 |
| 104 | -.015843 | -.040409 | -.064593 | -.088376 | -.111735 | -.134652 |
| 106 | -.049266 | -.074088 | -.098480 | -.122420 | -.145888 | -.168862 |
| 108 | -.082939 | -.107970 | -.132521 | -.156568 | -.180088 | -.203062 |
| 110 | -.116849 | -.142042 | -.166699 | -.190797 | -.214314 | -.237227 |
| 112 | -.150987 | -.176289 | -.200999 | -.225091 | -.248543 | -.271331 |
| 114 | -.185343 | -.210700 | -.235404 | -.259430 | -.282753 | -.305351 |
| 116 | -.219909 | -.245265 | -.269902 | -.293797 | -.316925 | -.339262 |
| 118 | -.254680 | -.279973 | -.304480 | -.328177 | -.351039 | -.373043 |
| | | | | | | |
| 120 | -.289652 | -.314817 | -.339127 | -.362556 | -.385079 | -.406673 |
| 122 | -.324822 | -.349793 | -.373835 | -.396921 | -.419027 | -.440131 |
| 124 | -.360192 | -.384898 | -.408596 | -.431262 | -.452870 | -.473400 |
| 126 | -.395766 | -.420130 | -.443407 | -.465570 | -.486597 | -.506464 |
| 128 | -.431550 | -.455494 | -.478267 | -.499842 | -.520196 | -.539309 |
| 130 | -.467557 | -.490997 | -.513177 | -.534073 | -.553661 | -.571922 |
| 132 | -.503801 | -.526649 | -.548146 | -.568266 | -.586989 | -.604297 |
| 134 | -.540305 | -.562467 | -.583182 | -.602426 | -.620179 | -.636426 |
| 136 | -.577097 | -.598474 | -.618302 | -.636563 | -.653236 | -.668308 |
| 138 | -.614213 | -.634698 | -.653531 | -.670694 | -.686170 | -.699947 |
| 140 | -.651697 | -.671177 | -.688897 | -.704841 | -.718995 | -.731349 |
| 142 | -.689607 | -.707961 | -.724442 | -.739037 | -.751735 | -.762530 |
| 144 | -.728013 | -.745109 | -.760216 | -.773323 | -.784422 | -.793511 |
| 146 | -.767001 | -.782699 | -.796286 | -.807753 | -.817099 | -.824324 |
| 148 | -.806681 | -.820826 | -.832733 | -.842397 | -.849821 | -.855012 |
| | | | | | | |
| 150 | -.847186 | -.859610 | -.869662 | -.877344 | -.882663 | -.885631 |
| 152 | -.888685 | -.899202 | -.907207 | -.912708 | -.915719 | -.916258 |
| 154 | -.931392 | -.939792 | -.945535 | -.948635 | -.949111 | -.946991 |
| 156 | -.975576 | -.981626 | -.984865 | -.985313 | -.983000 | -.977960 |
| 158 | -1.021588 | -1.025019 | -1.025476 | -1.022988 | -1.017594 | -1.009338 |
| 160 | -1.069886 | -1.070387 | -1.067740 | -1.061986 | -1.053172 | -1.041355 |
| 162 | -1.121086 | -1.118288 | -1.112156 | -1.102743 | -1.090109 | -1.074321 |
| 164 | -1.176032 | -1.169488 | -1.159411 | -1.145865 | -1.128924 | -1.108672 |
| 166 | -1.235920 | -1.225077 | -1.210480 | -1.192211 | -1.170358 | -1.145024 |
| 168 | -1.302522 | -1.286667 | -1.266812 | -1.243057 | -1.215513 | -1.184301 |
| 170 | -1.378607 | -1.356778 | -1.330669 | -1.300402 | -1.266112 | -1.227945 |
| 172 | -1.468842 | -1.439663 | -1.405872 | -1.367620 | -1.325071 | -1.278402 |
| 174 | -1.582024 | -1.543338 | -1.499624 | -1.451073 | -1.397887 | -1.340284 |
| 176 | -1.737975 | -1.685868 | -1.628166 | -1.565112 | -1.496965 | -1.424001 |
| 178 | -2.000132 | -1.925078 | -1.843481 | -1.755675 | -1.662019 | -1.562888 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

41

$$P_\nu(\cos \theta)$$

| $\nu$ | .90 | .92 | .94 | .96 | .98 | 1.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999479 | .999462 | .999444 | .999426 | .999409 | .999390 |
| 4 | .997917 | .997848 | .997778 | .997708 | .997636 | .997564 |
| 6 | .995315 | .995161 | .995004 | .994845 | .994684 | .994521 |
| 8 | .991676 | .991402 | .991124 | .990842 | .990557 | .990268 |
| 10 | .987003 | .986576 | .986143 | .985703 | .985258 | .984807 |
| 12 | .981301 | .980687 | .980065 | .979434 | .978795 | .978147 |
| 14 | .974575 | .973742 | .972897 | .972041 | .971174 | .970295 |
| 16 | .966831 | .965747 | .964648 | .963534 | .962405 | .961261 |
| 18 | .958078 | .956710 | .955324 | .953920 | .952497 | .951056 |
| 20 | .948322 | .946641 | .944937 | .943211 | .941463 | .939692 |
| 22 | .937575 | .935549 | .933497 | .931419 | .929314 | .927183 |
| 24 | .925844 | .923446 | .921017 | .918557 | .916066 | .913545 |
| 26 | .913143 | .910344 | .907509 | .904639 | .901734 | .898794 |
| 28 | .899483 | .896255 | .892988 | .889681 | .886334 | .882947 |
| 30 | .884876 | .881195 | .877469 | .873698 | .869884 | .866025 |
| 32 | .869338 | .865178 | .860968 | .856710 | .852403 | .848048 |
| 34 | .852882 | .848220 | .843504 | .838734 | .833912 | .829037 |
| 36 | .835524 | .830338 | .825093 | .819791 | .814432 | .809017 |
| 38 | .817280 | .811550 | .805757 | .799902 | .793986 | .788010 |
| 40 | .798169 | .791874 | .785514 | .779088 | .772598 | .766044 |
| 42 | .778207 | .771332 | .764386 | .757373 | .750292 | .743144 |
| 44 | .757414 | .749942 | .742397 | .734780 | .727094 | .719339 |
| 46 | .735809 | .727726 | .719567 | .711335 | .703032 | .694658 |
| 48 | .713413 | .704706 | .695923 | .687064 | .678133 | .669130 |
| 50 | .690247 | .680906 | .671487 | .661993 | .652426 | .642787 |
| 52 | .666332 | .656349 | .646287 | .636151 | .625941 | .615661 |
| 54 | .641691 | .631058 | .620349 | .609565 | .598709 | .587785 |
| 56 | .616347 | .605061 | .593699 | .582264 | .570761 | .559192 |
| 58 | .590324 | .578381 | .566365 | .554280 | .542130 | .529919 |
| 60 | .563646 | .551045 | .538377 | .525643 | .512850 | .500000 |
| 62 | .536337 | .523081 | .509762 | .496385 | .482953 | .469471 |
| 64 | .508423 | .494516 | .480552 | .466536 | .452474 | .438371 |
| 66 | .479931 | .465378 | .450776 | .436132 | .421450 | .406736 |
| 68 | .450885 | .435695 | .420466 | .405204 | .389915 | .374606 |
| 70 | .421314 | .405497 | .389652 | .373787 | .357907 | .342020 |
| 72 | .391243 | .374813 | .358368 | .341915 | .325462 | .309017 |
| 74 | .360702 | .343673 | .326644 | .309623 | .292618 | .275637 |
| 76 | .329716 | .312107 | .294514 | .276947 | .259413 | .241922 |
| 78 | .298316 | .280146 | .262011 | .243921 | .225885 | .207911 |
| 80 | .266528 | .247821 | .229169 | .210583 | .192072 | .173648 |
| 82 | .234382 | .215162 | .196020 | .176968 | .158015 | .139173 |
| 84 | .201905 | .182201 | .162599 | .143112 | .123751 | .104528 |
| 86 | .169128 | .148969 | .128940 | .109054 | .089321 | .069756 |
| 88 | .136079 | .115499 | .095077 | .074828 | .054764 | .034899 |
| 90 | .102787 | .081820 | .061044 | .040473 | .020120 | .000000 |

$$P_\nu(\cos\theta)$$

| $\nu$ | .90 | .92 | .94 | .96 | .98 | 1.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .102787 | .081820 | .061044 | .040473 | .020120 | -.000000 |
| 92 | .069280 | .047965 | .026875 | .006025 | -.014571 | -.034899 |
| 94 | .035588 | .013966 | -.007394 | -.028478 | -.049271 | -.069756 |
| 96 | .001740 | -.020145 | -.041731 | -.063001 | -.083939 | -.104528 |
| 98 | -.032235 | -.054340 | -.076102 | -.097506 | -.118535 | -.139173 |
| 100 | -.066312 | -.088585 | -.110473 | -.131957 | -.153021 | -.173648 |
| 102 | -.100460 | -.122851 | -.144809 | -.166317 | -.187357 | -.207911 |
| 104 | -.134652 | -.157106 | -.179078 | -.200550 | -.221504 | -.241922 |
| 106 | -.168862 | -.191321 | -.213247 | -.234621 | -.255423 | -.275637 |
| 108 | -.203062 | -.225467 | -.247284 | -.268494 | -.289077 | -.309017 |
| 110 | -.237227 | -.259514 | -.281157 | -.302134 | -.322428 | -.342020 |
| 112 | -.271331 | -.293435 | -.314834 | -.335508 | -.355438 | -.374606 |
| 114 | -.305351 | -.327202 | -.348285 | -.368580 | -.388070 | -.406736 |
| 116 | -.339262 | -.360788 | -.381480 | -.401320 | -.420289 | -.438371 |
| 118 | -.373043 | -.394167 | -.414390 | -.433694 | -.452060 | -.469471 |
| 120 | -.406673 | -.427316 | -.446988 | -.465671 | -.483346 | -.500000 |
| 122 | -.440131 | -.460210 | -.479246 | -.497220 | -.514116 | -.529919 |
| 124 | -.473400 | -.492829 | -.511139 | -.528313 | -.544335 | -.559192 |
| 126 | -.506464 | -.525152 | -.542643 | -.558921 | -.573973 | -.587785 |
| 128 | -.539309 | -.557161 | -.573736 | -.589018 | -.602997 | -.615661 |
| 130 | -.571922 | -.588839 | -.604395 | -.618579 | -.631379 | -.642787 |
| 132 | -.604297 | -.620173 | -.634604 | -.647578 | -.659089 | -.669130 |
| 134 | -.636426 | -.651151 | -.664344 | -.675996 | -.686102 | -.694658 |
| 136 | -.668308 | -.681767 | -.693604 | -.703812 | -.712391 | -.719339 |
| 138 | -.699947 | -.712016 | -.722371 | -.731009 | -.737933 | -.743144 |
| 140 | -.731349 | -.741898 | -.750639 | -.757573 | -.762705 | -.766044 |
| 142 | -.762530 | -.771419 | -.778405 | -.783492 | -.786689 | -.788010 |
| 144 | -.793511 | -.800592 | -.805671 | -.808758 | -.809867 | -.809017 |
| 146 | -.824324 | -.829436 | -.832446 | -.833368 | -.832224 | -.829037 |
| 148 | -.855012 | -.857981 | -.858745 | -.857326 | -.853749 | -.848048 |
| 150 | -.885631 | -.886267 | -.884593 | -.880638 | -.874436 | -.866025 |
| 152 | -.916258 | -.914350 | -.910026 | -.903323 | -.894281 | -.882947 |
| 154 | -.946991 | -.942306 | -.935096 | -.925406 | -.913287 | -.898794 |
| 156 | -.977960 | -.970235 | -.959874 | -.946930 | -.931465 | -.913545 |
| 158 | -1.009338 | -.998272 | -.984454 | -.967951 | -.948835 | -.927183 |
| 160 | -1.041355 | -1.026597 | -1.008970 | -.988553 | -.965429 | -.939692 |
| 162 | -1.074321 | -1.055458 | -1.033604 | -1.008851 | -.981299 | -.951056 |
| 164 | -1.108672 | -1.085200 | -1.058611 | -1.029012 | -.996521 | -.961261 |
| 166 | -1.145024 | -1.116319 | -1.084361 | -1.049279 | -1.011209 | -.970295 |
| 168 | -1.184301 | -1.149551 | -1.111406 | -1.070016 | -1.025541 | -.978147 |
| 170 | -1.227945 | -1.186058 | -1.140619 | -1.091804 | -1.039802 | -.984807 |
| 172 | -1.278402 | -1.227803 | -1.173474 | -1.115626 | -1.054481 | -.990268 |
| 174 | -1.340284 | -1.278496 | -1.212766 | -1.143348 | -1.070508 | -.994521 |
| 176 | -1.424001 | -1.346512 | -1.264801 | -1.179185 | -1.089993 | -.997564 |
| 178 | -1.562888 | -1.458674 | -1.349788 | -1.236653 | -1.119704 | -.999390 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | -1.000000 |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999390 | .999372 | .999353 | .999335 | .999315 | .999296 |
| 4 | .997564 | .997490 | .997416 | .997340 | .997264 | .997186 |
| 6 | .994521 | .994356 | .994189 | .994019 | .993848 | .993674 |
| 8 | .990268 | .989974 | .989677 | .989377 | .989072 | .988763 |
| 10 | .984807 | .984350 | .983887 | .983418 | .982944 | .982463 |
| 12 | .978147 | .977491 | .976826 | .976153 | .975471 | .974781 |
| 14 | .970295 | .969405 | .968504 | .967591 | .966666 | .965731 |
| 16 | .961261 | .960103 | .958930 | .957743 | .956541 | .955324 |
| 18 | .951056 | .949597 | .948119 | .946624 | .945110 | .943578 |
| 20 | .939692 | .937900 | .936085 | .934248 | .932390 | .930509 |
| 22 | .927183 | .925026 | .922843 | .920634 | .918399 | .916138 |
| 24 | .913545 | .910993 | .908411 | .905799 | .903157 | .900485 |
| 26 | .898794 | .895819 | .892809 | .889765 | .886687 | .883575 |
| 28 | .882947 | .879522 | .876057 | .872554 | .869012 | .865432 |
| 30 | .866025 | .862123 | .858177 | .854189 | .850158 | .846085 |
| 32 | .848048 | .843645 | .839194 | .834697 | .830153 | .825562 |
| 34 | .829037 | .824110 | .819132 | .814103 | .809024 | .803894 |
| 36 | .809017 | .803545 | .798019 | .792438 | .786803 | .781115 |
| 38 | .788010 | .781975 | .775881 | .769730 | .763521 | .757257 |
| 40 | .766044 | .759428 | .752750 | .746012 | .739214 | .732357 |
| 42 | .743144 | .735932 | .728655 | .721316 | .713915 | .706453 |
| 44 | .719339 | .711517 | .703629 | .695677 | .687662 | .679584 |
| 46 | .694658 | .686215 | .677706 | .669131 | .660492 | .651791 |
| 48 | .669130 | .660058 | .650919 | .641714 | .632446 | .623115 |
| 50 | .642787 | .633079 | .623304 | .613465 | .603563 | .593600 |
| 52 | .615661 | .605313 | .594899 | .584423 | .573886 | .563291 |
| 54 | .587785 | .576795 | .565742 | .554629 | .543458 | .532233 |
| 56 | .559192 | .547561 | .535870 | .524123 | .512324 | .500474 |
| 58 | .529919 | .517649 | .505325 | .492950 | .480528 | .468063 |
| 60 | .500000 | .487097 | .474147 | .461152 | .448118 | .435047 |
| 62 | .469471 | .455945 | .442377 | .428774 | .415140 | .401478 |
| 64 | .438371 | .424231 | .410059 | .395862 | .381643 | .367408 |
| 66 | .406736 | .391996 | .377236 | .362460 | .347676 | .332887 |
| 68 | .374606 | .359283 | .343951 | .328618 | .313288 | .297969 |
| 70 | .342020 | .326132 | .310250 | .294380 | .278531 | .262707 |
| 72 | .309017 | .292586 | .276177 | .259798 | .243455 | .227156 |
| 74 | .275637 | .258688 | .241779 | .224918 | .208112 | .191370 |
| 76 | .241922 | .224481 | .207101 | .189790 | .172555 | .155405 |
| 78 | .207911 | .190010 | .172191 | .154463 | .136835 | .119316 |
| 80 | .173648 | .155319 | .137096 | .118989 | .101007 | .083159 |
| 82 | .139173 | .120452 | .101863 | .083416 | .065122 | .046991 |
| 84 | .104528 | .085454 | .066540 | .047797 | .029236 | .010868 |
| 86 | .069756 | .050370 | .031174 | .012181 | -.006598 | -.025152 |
| 88 | .034899 | .015245 | -.004185 | -.023380 | -.042327 | -.061015 |
| 90 | .000000 | -.019874 | -.039491 | -.058836 | -.077897 | -.096662 |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.000000 | -.019875 | -.039491 | -.058836 | -.077897 | -.096662 |
| 92 | -.034899 | -.054945 | -.074695 | -.094136 | -.113254 | -.132037 |
| 94 | -.069756 | -.089920 | -.109749 | -.129228 | -.148344 | -.167084 |
| 96 | -.104528 | -.124755 | -.144604 | -.164061 | -.183113 | -.201745 |
| 98 | -.139173 | -.159404 | -.179213 | -.198586 | -.217508 | -.235965 |
| 100 | -.173648 | -.193822 | -.213528 | -.232750 | -.251475 | -.269688 |
| 102 | -.207911 | -.227965 | -.247501 | -.266505 | -.284961 | -.302857 |
| 104 | -.241922 | -.261787 | -.281085 | -.299799 | -.317914 | -.335418 |
| 106 | -.275637 | -.295245 | -.314232 | -.332583 | -.350282 | -.367315 |
| 108 | -.309017 | -.328295 | -.346897 | -.364807 | -.382011 | -.398495 |
| 110 | -.342020 | -.360893 | -.379033 | -.396423 | -.413051 | -.428902 |
| 112 | -.374606 | -.392997 | -.410594 | -.427383 | -.443350 | -.458483 |
| 114 | -.406736 | -.424563 | -.441534 | -.457636 | -.472857 | -.487185 |
| 116 | -.438371 | -.455549 | -.471808 | -.487137 | -.501523 | -.514954 |
| 118 | -.469471 | -.485913 | -.501373 | -.515837 | -.529296 | -.541739 |
| 120 | -.500000 | -.515616 | -.530183 | -.543690 | -.556127 | -.567486 |
| 122 | -.529919 | -.544616 | -.558195 | -.570648 | -.581967 | -.592145 |
| 124 | -.559192 | -.572873 | -.585367 | -.596667 | -.606766 | -.615662 |
| 126 | -.587785 | -.600348 | -.611655 | -.621699 | -.630476 | -.637986 |
| 128 | -.615661 | -.627003 | -.637016 | -.645698 | -.653048 | -.659065 |
| 130 | -.642787 | -.652799 | -.661410 | -.668620 | -.674431 | -.678846 |
| 132 | -.669130 | -.677698 | -.684794 | -.690418 | -.694577 | -.697277 |
| 134 | -.694658 | -.701665 | -.707126 | -.711046 | -.713434 | -.714302 |
| 136 | -.719339 | -.724662 | -.728364 | -.730457 | -.730952 | -.729866 |
| 138 | -.743144 | -.746652 | -.748468 | -.748604 | -.747078 | -.743911 |
| 140 | -.766044 | -.767601 | -.767392 | -.765437 | -.761756 | -.756376 |
| 142 | -.788010 | -.787472 | -.785096 | -.780905 | -.774928 | -.767197 |
| 144 | -.809017 | -.806230 | -.801532 | -.794955 | -.786533 | -.776303 |
| 146 | -.829037 | -.823836 | -.816655 | -.807530 | -.796503 | -.783618 |
| 148 | -.848048 | -.840256 | -.830414 | -.818567 | -.804764 | -.789058 |
| 150 | -.866025 | -.855449 | -.842756 | -.827998 | -.811235 | -.792526 |
| 152 | -.882947 | -.869375 | -.853620 | -.835745 | -.815818 | -.793909 |
| 154 | -.898794 | -.881989 | -.862940 | -.841719 | -.818403 | -.793074 |
| 156 | -.913545 | -.893243 | -.870638 | -.845813 | -.818856 | -.789862 |
| 158 | -.927183 | -.903082 | -.876622 | -.847898 | -.817012 | -.784072 |
| 160 | -.939692 | -.911439 | -.880776 | -.847812 | -.812663 | -.775450 |
| 162 | -.951056 | -.918235 | -.882956 | -.845346 | -.805535 | -.763663 |
| 164 | -.961261 | -.923365 | -.882969 | -.840219 | -.795265 | -.748261 |
| 166 | -.970295 | -.926690 | -.880551 | -.832043 | -.781338 | -.728611 |
| 168 | -.978147 | -.928011 | -.875314 | -.820246 | -.763002 | -.703782 |
| 170 | -.984807 | -.927024 | -.866664 | -.803943 | -.739087 | -.672324 |
| 172 | -.990268 | -.923226 | -.853601 | -.781647 | -.707623 | -.631791 |
| 174 | -.994521 | -.915672 | -.834252 | -.750559 | -.664897 | -.577576 |
| 176 | -.997564 | -.902244 | -.804392 | -.704367 | -.602540 | -.499282 |
| 178 | -.999390 | -.876169 | -.750505 | -.622870 | -.493741 | -.363598 |
| 180 | -1.000000 | ∞ | ∞ | ∞ | ∞ | ∞ |

| $\nu$ | 1.10 | 1.12 | 1.14 | 1.16 | 1.18 | 1.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999296 | .999276 | .999257 | .999236 | .999216 | .999195 |
| 4 | .997186 | .997108 | .997029 | .996948 | .996867 | .996785 |
| 6 | .993674 | .993498 | .993319 | .993139 | .992956 | .992772 |
| 8 | .988763 | .988451 | .988135 | .987815 | .987491 | .987163 |
| 10 | .982463 | .981976 | .981484 | .980985 | .980481 | .979970 |
| 12 | .974781 | .974083 | .973376 | .972661 | .971937 | .971205 |
| 14 | .965731 | .964784 | .963826 | .962856 | .961876 | .960884 |
| 16 | .955324 | .954093 | .952848 | .951588 | .950314 | .949025 |
| 18 | .943578 | .942028 | .940460 | .938875 | .937271 | .935650 |
| 20 | .930509 | .928607 | .926683 | .924738 | .922771 | .920782 |
| 22 | .916138 | .913851 | .911539 | .909201 | .906838 | .904450 |
| 24 | .900485 | .897783 | .895052 | .892291 | .889501 | .886682 |
| 26 | .883575 | .880429 | .877249 | .874036 | .870790 | .867510 |
| 28 | .865432 | .861815 | .858159 | .854467 | .850737 | .846970 |
| 30 | .846085 | .841970 | .837814 | .833616 | .829377 | .825098 |
| 32 | .825562 | .820926 | .816245 | .811519 | .806748 | .801934 |
| 34 | .803894 | .798716 | .793489 | .788213 | .782890 | .777519 |
| 36 | .781115 | .775374 | .769581 | .763737 | .757843 | .751899 |
| 38 | .757257 | .750937 | .744562 | .738134 | .731653 | .725120 |
| 40 | .732357 | .725443 | .718472 | .711445 | .704364 | .697229 |
| 42 | .706453 | .698932 | .691353 | .683717 | .676026 | .668279 |
| 44 | .679584 | .671447 | .663250 | .654996 | .646686 | .638322 |
| 46 | .651791 | .643030 | .634209 | .625332 | .616398 | .607411 |
| 48 | .623115 | .613725 | .604277 | .594773 | .585215 | .575605 |
| 50 | .593600 | .583580 | .573503 | .563373 | .553191 | .542960 |
| 52 | .563291 | .552641 | .541937 | .531184 | .520382 | .509536 |
| 54 | .532233 | .520957 | .509632 | .498262 | .486848 | .475395 |
| 56 | .500474 | .488579 | .476640 | .464662 | .452647 | .440600 |
| 58 | .468063 | .455557 | .443016 | .430443 | .417840 | .405213 |
| 60 | .435047 | .421945 | .408815 | .395662 | .382489 | .369301 |
| 62 | .401478 | .387795 | .374094 | .360380 | .346657 | .332930 |
| 64 | .367408 | .353162 | .338909 | .324656 | .310407 | .296167 |
| 66 | .332887 | .318100 | .303320 | .288553 | .273805 | .259080 |
| 68 | .297969 | .282666 | .267385 | .252133 | .236915 | .221738 |
| 70 | .262707 | .246916 | .231164 | .215459 | .199806 | .184211 |
| 72 | .227156 | .210908 | .194719 | .178594 | .162542 | .146570 |
| 74 | .191370 | .174700 | .158108 | .141603 | .125192 | .108884 |
| 76 | .155405 | .138349 | .121395 | .104551 | .087825 | .071225 |
| 78 | .119316 | .101915 | .084640 | .067501 | .050507 | .033664 |
| 80 | .083159 | .065456 | .047907 | .030521 | .013307 | -.003725 |
| 82 | .046991 | .029033 | .011257 | -.006325 | -.023706 | -.040875 |
| 84 | .010868 | -.007295 | -.025245 | -.042971 | -.060463 | -.077711 |
| 86 | -.025152 | -.043470 | -.061540 | -.079353 | -.096897 | -.114163 |
| 88 | -.061015 | -.079431 | -.097564 | -.115404 | -.132939 | -.150159 |
| 90 | -.096662 | -.115118 | -.133254 | -.151059 | -.168521 | -.185629 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 1.10 | 1.12 | 1.14 | 1.16 | 1.18 | 1.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.096662 | -.115118 | -.133255 | -.151059 | -.168521 | -.185629 |
| 92 | -.132037 | -.150473 | -.168549 | -.186253 | -.203574 | -.220501 |
| 94 | -.167084 | -.185435 | -.203385 | -.220921 | -.238032 | -.254707 |
| 96 | -.201745 | -.219945 | -.237700 | -.254998 | -.271827 | -.288176 |
| 98 | -.235965 | -.253945 | -.271434 | -.288420 | -.304892 | -.320838 |
| 100 | -.269688 | -.287375 | -.304525 | -.321125 | -.337163 | -.352628 |
| 102 | -.302857 | -.320178 | -.336913 | -.353048 | -.368572 | -.383476 |
| 104 | -.335418 | -.352296 | -.368536 | -.384127 | -.399056 | -.413315 |
| 106 | -.367315 | -.383671 | -.399336 | -.414300 | -.428551 | -.442080 |
| 108 | -.398495 | -.414246 | -.429253 | -.443505 | -.456992 | -.469706 |
| 110 | -.428902 | -.443964 | -.458228 | -.471682 | -.484318 | -.496127 |
| 112 | -.458483 | -.472771 | -.486203 | -.498770 | -.510465 | -.521280 |
| 114 | -.487185 | -.500608 | -.513119 | -.524709 | -.535372 | -.545102 |
| 116 | -.514954 | -.527423 | -.538921 | -.549441 | -.558979 | -.567530 |
| 118 | -.541739 | -.553159 | -.563549 | -.572906 | -.581224 | -.588502 |
| 120 | -.567486 | -.577762 | -.586949 | -.595044 | -.602047 | -.607957 |
| 122 | -.592145 | -.601177 | -.609062 | -.615799 | -.621388 | -.625832 |
| 124 | -.615662 | -.623351 | -.629833 | -.635111 | -.639186 | -.642066 |
| 126 | -.637986 | -.644228 | -.649205 | -.652920 | -.655382 | -.656597 |
| 128 | -.659065 | -.663754 | -.667119 | -.669169 | -.669913 | -.669362 |
| 130 | -.678846 | -.681873 | -.683519 | -.683796 | -.682717 | -.680298 |
| 132 | -.697277 | -.698528 | -.698344 | -.696739 | -.693730 | -.689338 |
| 134 | -.714302 | -.713663 | -.711534 | -.707934 | -.702886 | -.696413 |
| 136 | -.729866 | -.727216 | -.723025 | -.717315 | -.710115 | -.701453 |
| 138 | -.743911 | -.739126 | -.732750 | -.724811 | -.715343 | -.704380 |
| 140 | -.756376 | -.749326 | -.740638 | -.730347 | -.718491 | -.705112 |
| 142 | -.767197 | -.757745 | -.746613 | -.733841 | -.719473 | -.703559 |
| 144 | -.776303 | -.764307 | -.750591 | -.735202 | -.718193 | -.699620 |
| 146 | -.783618 | -.768926 | -.752478 | -.734330 | -.714544 | -.693180 |
| 148 | -.789058 | -.771506 | -.752169 | -.731111 | -.708400 | -.684108 |
| 150 | -.792526 | -.771938 | -.749541 | -.725409 | -.699619 | -.672251 |
| 152 | -.793909 | -.770093 | -.744451 | -.717067 | -.688027 | -.657423 |
| 154 | -.793074 | -.765819 | -.736727 | -.705894 | -.673418 | -.639400 |
| 156 | -.789862 | -.758928 | -.726156 | -.691655 | -.655532 | -.617904 |
| 158 | -.784072 | -.749187 | -.712474 | -.674053 | -.634046 | -.592581 |
| 160 | -.775450 | -.736298 | -.695340 | -.652707 | -.608538 | -.562975 |
| 162 | -.763663 | -.719870 | -.674303 | -.627112 | -.578451 | -.528477 |
| 164 | -.748261 | -.699368 | -.648751 | -.596578 | -.543021 | -.488254 |
| 166 | -.728611 | -.674044 | -.617822 | -.560133 | -.501170 | -.441128 |
| 168 | -.703782 | -.642792 | -.580240 | -.516338 | -.451303 | -.385351 |
| 170 | -.672324 | -.603887 | -.534014 | -.462944 | -.390921 | -.318188 |
| 172 | -.631791 | -.554421 | -.475784 | -.396153 | -.315805 | -.235013 |
| 174 | -.577576 | -.488908 | -.399209 | -.308794 | -.217982 | -.127088 |
| 176 | -.499282 | -.394967 | -.289972 | -.184673 | -.079446 | .025335 |
| 178 | -.363598 | -.232919 | -.102187 | .028121 | .157533 | .285579 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.20 | 1.22 | 1.24 | 1.26 | 1.28 | 1.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999195 | .999175 | .999154 | .999132 | .999111 | .999089 |
| 4 | .996785 | .996702 | .996617 | .996532 | .996446 | .996359 |
| 6 | .992772 | .992585 | .992396 | .992204 | .992011 | .991815 |
| 8 | .987163 | .986832 | .986497 | .986158 | .985815 | .985468 |
| 10 | .979970 | .979454 | .978932 | .978404 | .977870 | .977330 |
| 12 | .971205 | .970464 | .969716 | .968958 | .968193 | .967419 |
| 14 | .960884 | .959880 | .958866 | .957840 | .956804 | .955756 |
| 16 | .949025 | .947721 | .946404 | .945072 | .943726 | .942365 |
| 18 | .935650 | .934010 | .932353 | .930678 | .928986 | .927276 |
| 20 | .920782 | .918772 | .916741 | .914688 | .912615 | .910520 |
| 22 | .904450 | .902036 | .899598 | .897134 | .894646 | .892133 |
| 24 | .886682 | .883834 | .880956 | .878051 | .875116 | .872153 |
| 26 | .867510 | .864198 | .860853 | .857476 | .854066 | .850625 |
| 28 | .846970 | .843167 | .839327 | .835451 | .831539 | .827592 |
| 30 | .825098 | .820778 | .816419 | .812020 | .807582 | .803106 |
| 32 | .801934 | .797076 | .792174 | .787230 | .782244 | .777217 |
| 34 | .777519 | .772102 | .766640 | .761131 | .755578 | .749981 |
| 36 | .751899 | .745906 | .739864 | .733775 | .727639 | .721456 |
| 38 | .725120 | .718535 | .711901 | .705217 | .698484 | .691703 |
| 40 | .697229 | .690042 | .682803 | .675513 | .668174 | .660787 |
| 42 | .668279 | .660480 | .652628 | .644725 | .636773 | .628773 |
| 44 | .638322 | .629904 | .621434 | .612914 | .604345 | .595729 |
| 46 | .607411 | .598372 | .589283 | .580144 | .570959 | .561728 |
| 48 | .575605 | .565944 | .556236 | .546481 | .536683 | .526842 |
| 50 | .542960 | .532682 | .522359 | .511994 | .501589 | .491146 |
| 52 | .509536 | .498647 | .487718 | .476752 | .465751 | .454717 |
| 54 | .475395 | .463905 | .452381 | .440826 | .429243 | .417635 |
| 56 | .440600 | .428522 | .416418 | .404291 | .392143 | .379980 |
| 58 | .405213 | .392565 | .379899 | .367219 | .354529 | .341832 |
| 60 | .369301 | .356102 | .342896 | .329687 | .316479 | .303277 |
| 62 | .332930 | .319204 | .305483 | .291772 | .278075 | .264397 |
| 64 | .296167 | .281941 | .267734 | .253552 | .239398 | .225278 |
| 66 | .259080 | .244385 | .229724 | .215104 | .200530 | .186006 |
| 68 | .221738 | .206608 | .191529 | .176509 | .161554 | .146668 |
| 70 | .184211 | .168683 | .153226 | .137847 | .122553 | .107350 |
| 72 | .146570 | .130684 | .114891 | .099198 | .083612 | .068140 |
| 74 | .108884 | .092684 | .076601 | .060642 | .044815 | .029125 |
| 76 | .071225 | .054759 | .038436 | .022262 | .006245 | -.009605 |
| 78 | .033664 | .016983 | .000471 | -.015862 | -.032011 | -.047966 |
| 80 | -.003725 | -.020569 | -.037213 | -.053650 | -.069872 | -.085869 |
| 82 | -.040875 | -.057823 | -.074541 | -.091021 | -.107253 | -.123228 |
| 84 | -.077711 | -.094705 | -.111436 | -.127894 | -.144070 | -.159956 |
| 86 | -.114163 | -.131140 | -.147818 | -.164188 | -.180241 | -.195968 |
| 88 | -.150159 | -.167053 | -.183612 | -.199825 | -.215684 | -.231179 |
| 90 | -.185629 | -.202372 | -.218742 | -.234726 | -.250318 | -.265505 |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.20 | 1.22 | 1.24 | 1.26 | 1.28 | 1.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.185629 | -.202373 | -.218742 | -.234727 | -.250317 | -.265506 |
| 92 | -.220501 | -.237024 | -.253131 | -.268813 | -.284061 | -.298865 |
| 94 | -.254707 | -.270935 | -.286705 | -.302008 | -.316835 | -.331175 |
| 96 | -.288176 | -.304033 | -.319390 | -.334235 | -.348561 | -.362357 |
| 98 | -.320838 | -.336248 | -.351112 | -.365419 | -.379161 | -.392330 |
| 100 | -.352628 | -.367510 | -.381798 | -.395485 | -.408561 | -.421019 |
| 102 | -.383476 | -.397748 | -.411379 | -.424361 | -.436686 | -.448346 |
| 104 | -.413315 | -.426893 | -.439782 | -.451974 | -.463461 | -.474237 |
| 106 | -.442080 | -.454879 | -.466939 | -.478253 | -.488815 | -.498620 |
| 108 | -.469706 | -.481638 | -.492781 | -.503130 | -.512678 | -.521423 |
| 110 | -.496127 | -.507103 | -.517241 | -.526534 | -.534980 | -.542575 |
| 112 | -.521280 | -.531211 | -.540252 | -.548400 | -.555652 | -.562009 |
| 114 | -.545102 | -.553895 | -.561748 | -.568660 | -.574629 | -.579657 |
| 116 | -.567530 | -.575093 | -.581666 | -.587248 | -.591843 | -.595453 |
| 118 | -.588502 | -.594741 | -.599940 | -.604102 | -.607231 | -.609333 |
| 120 | -.607957 | -.612776 | -.616507 | -.619155 | -.620728 | -.621232 |
| 122 | -.625832 | -.629135 | -.631304 | -.632346 | -.632270 | -.631087 |
| 124 | -.642066 | -.643757 | -.644267 | -.643609 | -.641793 | -.638836 |
| 126 | -.656597 | -.656577 | -.655333 | -.652880 | -.649235 | -.644414 |
| 128 | -.669362 | -.667532 | -.664437 | -.660096 | -.654529 | -.647758 |
| 130 | -.680298 | -.676556 | -.671513 | -.665189 | -.657610 | -.648801 |
| 132 | -.689338 | -.683584 | -.676493 | -.668092 | -.658409 | -.647477 |
| 134 | -.696413 | -.688543 | -.679306 | -.668732 | -.656856 | -.643714 |
| 136 | -.701453 | -.691362 | -.679876 | -.667034 | -.652873 | -.637437 |
| 138 | -.704380 | -.691961 | -.678125 | -.662916 | -.646379 | -.628563 |
| 140 | -.705112 | -.690254 | -.673963 | -.656290 | -.637285 | -.617003 |
| 142 | -.703559 | -.686149 | -.667295 | -.647056 | -.625489 | -.602656 |
| 144 | -.699620 | -.679539 | -.658012 | -.635103 | -.610879 | -.585406 |
| 146 | -.693180 | -.670306 | -.645990 | -.620304 | -.593322 | -.565122 |
| 148 | -.684108 | -.658310 | -.631083 | -.602508 | -.572667 | -.541645 |
| 150 | -.672251 | -.643390 | -.613122 | -.581537 | -.548727 | -.514787 |
| 152 | -.657423 | -.625348 | -.591899 | -.557177 | -.521282 | -.484319 |
| 154 | -.639400 | -.603946 | -.567163 | -.529161 | -.490054 | -.449956 |
| 156 | -.617904 | -.578885 | -.538596 | -.497159 | -.454698 | -.411338 |
| 158 | -.592581 | -.549787 | -.505797 | -.460746 | -.414769 | -.368005 |
| 160 | -.562975 | -.516160 | -.468242 | -.419367 | -.369686 | -.319349 |
| 162 | -.528477 | -.477349 | -.425230 | -.372282 | -.318671 | -.264561 |
| 164 | -.488254 | -.432454 | -.375801 | -.318473 | -.260651 | -.202517 |
| 166 | -.441128 | -.380202 | -.318589 | -.256490 | -.194101 | -.131621 |
| 168 | -.385351 | -.318700 | -.251570 | -.184181 | -.116749 | -.049494 |
| 170 | -.318188 | -.244988 | -.171567 | -.098168 | -.025032 | .047601 |
| 172 | -.235013 | -.154055 | -.073204 | .007267 | .087091 | .166001 |
| 174 | -.127088 | -.036427 | .053687 | .142949 | .231053 | .317702 |
| 176 | .025335 | .129303 | .232092 | .333345 | .432710 | .529846 |
| 178 | .285579 | .411799 | .535740 | .656960 | .775031 | .889536 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$P_{\nu}(\cos \theta)$$

| $\nu$ | 1.30 | 1.32 | 1.34 | 1.36 | 1.38 | 1.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .999089 | .999067 | .999045 | .999022 | .998999 | .998976 |
| 4 | .996359 | .996271 | .996182 | .996092 | .996001 | .995909 |
| 6 | .991815 | .991618 | .991418 | .991216 | .991011 | .990805 |
| 8 | .985468 | .985117 | .984763 | .984405 | .984043 | .983677 |
| 10 | .977330 | .976784 | .976233 | .975675 | .975112 | .974543 |
| 12 | .967419 | .966637 | .965846 | .965047 | .964240 | .963424 |
| 14 | .955756 | .954697 | .953626 | .952545 | .951453 | .950349 |
| 16 | .942365 | .940991 | .939602 | .938199 | .936781 | .935350 |
| 18 | .927276 | .925548 | .923803 | .922041 | .920261 | .918464 |
| 20 | .910520 | .908404 | .906267 | .904109 | .901931 | .899731 |
| 22 | .892133 | .889595 | .887032 | .884446 | .881834 | .879199 |
| 24 | .872153 | .869162 | .866143 | .863096 | .860021 | .856918 |
| 26 | .850625 | .847151 | .843646 | .840110 | .836542 | .832944 |
| 28 | .827592 | .823610 | .819593 | .815541 | .811454 | .807334 |
| 30 | .803106 | .798590 | .794037 | .789446 | .784818 | .780153 |
| 32 | .777217 | .772148 | .767038 | .761887 | .756697 | .751468 |
| 34 | .749981 | .744339 | .738655 | .732928 | .727160 | .721350 |
| 36 | .721456 | .715228 | .708954 | .702637 | .696276 | .689873 |
| 38 | .691703 | .684876 | .678003 | .671084 | .664122 | .657116 |
| 40 | .660787 | .653352 | .645871 | .638344 | .630774 | .623160 |
| 42 | .628773 | .620725 | .612632 | .604494 | .596312 | .588089 |
| 44 | .595729 | .587067 | .578361 | .569612 | .560821 | .551991 |
| 46 | .561728 | .552454 | .543137 | .533781 | .524386 | .514955 |
| 48 | .526842 | .516961 | .507041 | .497086 | .487096 | .477075 |
| 50 | .491146 | .480667 | .470156 | .459613 | .449042 | .438444 |
| 52 | .454717 | .443655 | .432565 | .421451 | .410315 | .399160 |
| 54 | .417635 | .406005 | .394356 | .382690 | .371011 | .359322 |
| 56 | .379980 | .367803 | .355616 | .343422 | .331225 | .319029 |
| 58 | .341832 | .329133 | .316435 | .303741 | .291056 | .278383 |
| 60 | .303277 | .290084 | .276904 | .263742 | .250602 | .237487 |
| 62 | .264397 | .250742 | .237115 | .223521 | .209962 | .196445 |
| 64 | .225278 | .211198 | .197161 | .183172 | .169238 | .155361 |
| 66 | .186006 | .171539 | .157134 | .142796 | .128530 | .114341 |
| 68 | .146668 | .131858 | .117129 | .102488 | .087939 | .073489 |
| 70 | .107350 | .092243 | .077240 | .062346 | .047567 | .032910 |
| 72 | .068140 | .052787 | .037562 | .022470 | .007517 | -.007289 |
| 74 | .029125 | .013581 | -.001810 | -.017044 | -.032111 | -.047006 |
| 76 | -.009605 | -.025285 | -.040785 | -.056098 | -.071217 | -.086135 |
| 78 | -.047966 | -.063721 | -.079266 | -.094595 | -.109700 | -.124575 |
| 80 | -.085869 | -.101635 | -.117161 | -.132439 | -.147462 | -.162222 |
| 82 | -.123228 | -.138939 | -.154377 | -.169534 | -.184403 | -.198976 |
| 84 | -.159956 | -.175543 | -.190823 | -.205787 | -.220428 | -.234738 |
| 86 | -.195968 | -.211359 | -.226407 | -.241103 | -.255440 | -.269409 |
| 88 | -.231179 | -.246301 | -.261041 | -.275392 | -.289346 | -.302894 |
| 90 | -.265505 | -.280281 | -.294636 | -.308563 | -.322053 | -.335100 |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.30 | 1.32 | 1.34 | 1.36 | 1.38 | 1.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.265506 | -.280281 | -.294637 | -.308563 | -.322054 | -.335100 |
| 92 | -.298865 | -.313216 | -.327106 | -.340528 | -.353473 | -.365934 |
| 94 | -.331175 | -.345021 | -.358365 | -.371198 | -.383515 | -.395307 |
| 96 | -.362357 | -.375615 | -.388329 | -.400491 | -.412093 | -.423131 |
| 98 | -.392330 | -.404918 | -.416918 | -.428322 | -.439125 | -.449322 |
| 100 | -.421019 | -.432851 | -.444050 | -.454611 | -.464529 | -.473798 |
| 102 | -.448346 | -.459335 | -.469648 | -.479279 | -.488224 | -.496480 |
| 104 | -.474237 | -.484297 | -.493636 | -.502250 | -.510136 | -.517291 |
| 106 | -.498620 | -.507663 | -.515940 | -.523449 | -.530188 | -.536157 |
| 108 | -.521423 | -.529360 | -.536488 | -.542805 | -.548311 | -.553007 |
| 110 | -.542575 | -.549318 | -.555208 | -.560246 | -.564434 | -.567772 |
| 112 | -.562009 | -.567469 | -.572034 | -.575706 | -.578490 | -.580388 |
| 114 | -.579657 | -.583745 | -.586898 | -.589119 | -.590414 | -.590790 |
| 116 | -.595453 | -.598081 | -.599735 | -.600419 | -.600144 | -.598917 |
| 118 | -.609333 | -.610413 | -.610481 | -.609546 | -.607619 | -.604712 |
| 120 | -.621232 | -.620677 | -.619075 | -.616438 | -.612780 | -.608116 |
| 122 | -.631087 | -.628811 | -.625455 | -.621035 | -.615569 | -.609075 |
| 124 | -.638836 | -.634752 | -.629560 | -.623279 | -.615929 | -.607534 |
| 126 | -.644414 | -.638438 | -.631329 | -.623109 | -.613804 | -.603440 |
| 128 | -.647758 | -.639806 | -.630700 | -.620467 | -.609136 | -.596739 |
| 130 | -.648801 | -.638792 | -.627611 | -.615292 | -.601868 | -.587375 |
| 132 | -.647477 | -.635328 | -.621997 | -.607521 | -.591940 | -.575293 |
| 134 | -.643714 | -.629345 | -.613789 | -.597088 | -.579287 | -.560432 |
| 136 | -.637437 | -.620769 | -.602914 | -.583923 | -.563843 | -.542728 |
| 138 | -.628563 | -.609517 | -.589293 | -.567946 | -.545532 | -.522108 |
| 140 | -.617003 | -.595501 | -.572837 | -.549073 | -.524270 | -.498493 |
| 142 | -.602656 | -.578620 | -.553447 | -.527204 | -.499962 | -.471790 |
| 144 | -.585406 | -.558758 | -.531006 | -.502226 | -.472495 | -.441890 |
| 146 | -.565122 | -.535781 | -.505382 | -.474006 | -.441738 | -.408664 |
| 148 | -.541645 | -.509530 | -.476412 | -.442381 | -.407530 | -.371953 |
| 150 | -.514787 | -.479813 | -.443903 | -.407158 | -.369677 | -.331564 |
| 152 | -.484319 | -.446395 | -.407617 | -.368094 | -.327936 | -.287254 |
| 154 | -.449956 | -.408983 | -.367254 | -.324887 | -.282001 | -.238718 |
| 156 | -.411338 | -.367208 | -.322436 | -.277151 | -.231482 | -.185560 |
| 158 | -.368005 | -.320593 | -.272673 | -.224385 | -.175870 | -.127268 |
| 160 | -.319349 | -.268510 | -.217320 | -.165930 | -.114493 | -.063159 |
| 162 | -.264561 | -.210117 | -.155507 | -.100892 | -.046439 | .007692 |
| 164 | -.202517 | -.144251 | -.086031 | -.028036 | .029555 | .086573 |
| 166 | -.131621 | -.069246 | -.007172 | .054407 | .115305 | .175332 |
| 168 | -.049494 | .017370 | .083632 | .149083 | .213515 | .276731 |
| 170 | .047601 | .119496 | .190421 | .260149 | .328457 | .395130 |
| 172 | .166001 | .243737 | .320044 | .394674 | .467384 | .537942 |
| 174 | .317702 | .402606 | .485480 | .566050 | .644051 | .719228 |
| 176 | .529846 | .624419 | .716109 | .804606 | .889612 | .970846 |
| 178 | .889536 | 1.000074 | 1.106260 | 1.207726 | 1.304125 | 1.395129 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.40 | 1.42 | 1.44 | 1.46 | 1.48 | 1.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998976 | .998953 | .998930 | .998906 | .998882 | .998858 |
| 4 | .995909 | .995816 | .995722 | .995627 | .995531 | .995435 |
| 6 | .990805 | .990596 | .990386 | .990173 | .989958 | .989740 |
| 8 | .983677 | .983307 | .982934 | .982557 | .982176 | .981791 |
| 10 | .974543 | .973968 | .973387 | .972800 | .972207 | .971609 |
| 12 | .963424 | .962601 | .961768 | .960928 | .960079 | .959223 |
| 14 | .950349 | .949235 | .948110 | .946973 | .945826 | .944667 |
| 16 | .935350 | .933905 | .932446 | .930972 | .929485 | .927984 |
| 18 | .918464 | .916649 | .914817 | .912968 | .911102 | .909219 |
| 20 | .899731 | .897511 | .895271 | .893010 | .890728 | .888426 |
| 22 | .879199 | .876540 | .873857 | .871149 | .868419 | .865664 |
| 24 | .856918 | .853788 | .850631 | .847447 | .844235 | .840997 |
| 26 | .832944 | .829314 | .825654 | .821964 | .818244 | .814494 |
| 28 | .807334 | .803180 | .798992 | .794771 | .790517 | .786231 |
| 30 | .780153 | .775451 | .770714 | .765940 | .761131 | .756287 |
| 32 | .751468 | .746200 | .740893 | .735548 | .730166 | .724747 |
| 34 | .721350 | .715499 | .709608 | .703678 | .697709 | .691701 |
| 36 | .689873 | .683428 | .676941 | .670415 | .663848 | .657243 |
| 38 | .657116 | .650068 | .642978 | .635848 | .628678 | .621469 |
| 40 | .623160 | .615504 | .607807 | .600071 | .592295 | .584482 |
| 42 | .588089 | .579825 | .571521 | .563180 | .554802 | .546388 |
| 44 | .551991 | .543122 | .534216 | .525275 | .516300 | .507294 |
| 46 | .514955 | .505489 | .495990 | .486459 | .476899 | .467312 |
| 48 | .477075 | .467023 | .456943 | .446837 | .436708 | .426556 |
| 50 | .438444 | .427823 | .417179 | .406517 | .395837 | .385143 |
| 52 | .399160 | .387989 | .376804 | .365608 | .354403 | .343193 |
| 54 | .359322 | .347625 | .335924 | .324222 | .312521 | .300824 |
| 56 | .319029 | .306835 | .294648 | .282471 | .270307 | .258160 |
| 58 | .278383 | .265725 | .253087 | .240471 | .227882 | .215323 |
| 60 | .237487 | .224402 | .211351 | .198337 | .185365 | .172438 |
| 62 | .196445 | .182974 | .169552 | .156184 | .142875 | .129629 |
| 64 | .155361 | .141548 | .127803 | .114130 | .100534 | .087021 |
| 66 | .114341 | .100235 | .086216 | .072291 | .058463 | .044738 |
| 68 | .073489 | .059142 | .044905 | .030783 | .016781 | .002904 |
| 70 | .032910 | .018380 | .003982 | -.010276 | -.024391 | -.038356 |
| 72 | -.007289 | -.021944 | -.036440 | -.050773 | -.064935 | -.078921 |
| 74 | -.047006 | -.061722 | -.076252 | -.090592 | -.104733 | -.118670 |
| 76 | -.086135 | -.100846 | -.115343 | -.129619 | -.143669 | -.157484 |
| 78 | -.124575 | -.139212 | -.153604 | -.167744 | -.181627 | -.195245 |
| 80 | -.162222 | -.176713 | -.190926 | -.204856 | -.218496 | -.231839 |
| 82 | -.198976 | -.213246 | -.227205 | -.240846 | -.254164 | -.267151 |
| 84 | -.234738 | -.248709 | -.262335 | -.275609 | -.288524 | -.301074 |
| 86 | -.269409 | -.283004 | -.296216 | -.309041 | -.321470 | -.333499 |
| 88 | -.302894 | -.316031 | -.328749 | -.341040 | -.352900 | -.364323 |
| 90 | -.335100 | -.347696 | -.359835 | -.371510 | -.382715 | -.393446 |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.50 | 1.52 | 1.54 | 1.56 | 1.58 | 1.60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998858 | .998833 | .998808 | .998783 | .998758 | .998733 |
| 4 | .995435 | .995337 | .995238 | .995138 | .995038 | .994936 |
| 6 | .989741 | .989521 | .989300 | .989076 | .988850 | .988622 |
| 8 | .981791 | .981403 | .981010 | .980614 | .980214 | .979811 |
| 10 | .971609 | .971005 | .970395 | .969779 | .969157 | .968530 |
| 12 | .959223 | .958358 | .957485 | .956603 | .955713 | .954816 |
| 14 | .944667 | .943498 | .942318 | .941127 | .939925 | .938712 |
| 16 | .927984 | .926469 | .924940 | .923397 | .921841 | .920270 |
| 18 | .909219 | .907319 | .905402 | .903468 | .901517 | .899549 |
| 20 | .888427 | .886105 | .883762 | .881400 | .879018 | .876616 |
| 22 | .865664 | .862886 | .860085 | .857261 | .854413 | .851543 |
| 24 | .840997 | .837732 | .834441 | .831123 | .827780 | .824410 |
| 26 | .814494 | .810715 | .806906 | .803067 | .799201 | .795305 |
| 28 | .786231 | .781912 | .777561 | .773179 | .768765 | .764320 |
| | | | | | | |
| 30 | .756287 | .751408 | .746496 | .741549 | .736569 | .731556 |
| 32 | .724747 | .719292 | .713801 | .708274 | .702712 | .697116 |
| 34 | .691701 | .685656 | .679574 | .673456 | .667301 | .661112 |
| 36 | .657243 | .650599 | .643918 | .637201 | .630447 | .623659 |
| 38 | .621469 | .614223 | .606939 | .599620 | .592266 | .584877 |
| 40 | .584482 | .576633 | .568748 | .560829 | .552877 | .544892 |
| 42 | .546388 | .537940 | .529459 | .520946 | .512403 | .503832 |
| 44 | .507294 | .498256 | .489189 | .480095 | .470974 | .461829 |
| 46 | .467312 | .457698 | .448060 | .438400 | .428719 | .419019 |
| 48 | .426556 | .416385 | .406195 | .395990 | .385771 | .375540 |
| 50 | .385144 | .374437 | .363720 | .352996 | .342267 | .331534 |
| 52 | .343193 | .331979 | .320764 | .309552 | .298343 | .287143 |
| 54 | .300824 | .289135 | .277456 | .265790 | .254141 | .242510 |
| 56 | .258160 | .246032 | .233927 | .221849 | .209799 | .197782 |
| 58 | .215324 | .202798 | .190310 | .177863 | .165460 | .153105 |
| | | | | | | |
| 60 | .172438 | .159561 | .146738 | .133971 | .121266 | .108625 |
| 62 | .129629 | .116450 | .103342 | .090310 | .077357 | .064488 |
| 64 | .087021 | .073594 | .060257 | .047016 | .033875 | .020838 |
| 66 | .044738 | .031120 | .017615 | .004227 | -.009038 | -.022178 |
| 68 | .002904 | -.010841 | -.024452 | -.037922 | -.051246 | -.064420 |
| 70 | -.038355 | -.052165 | -.065814 | -.079298 | -.092610 | -.105745 |
| 72 | -.078921 | -.092725 | -.106343 | -.119767 | -.132994 | -.146017 |
| 74 | -.118670 | -.132398 | -.145910 | -.159201 | -.172266 | -.185098 |
| 76 | -.157484 | -.171060 | -.184392 | -.197472 | -.210295 | -.222857 |
| 78 | -.195245 | -.208593 | -.221665 | -.234454 | -.246955 | -.259164 |
| 80 | -.231838 | -.244878 | -.257610 | -.270026 | -.282123 | -.293893 |
| 82 | -.267151 | -.279802 | -.292110 | -.304070 | -.315677 | -.326925 |
| 84 | -.301073 | -.313252 | -.325053 | -.336472 | -.347504 | -.358143 |
| 86 | -.333498 | -.345120 | -.356329 | -.367121 | -.377491 | -.387434 |
| 88 | -.364323 | -.375302 | -.385833 | -.395912 | -.405533 | -.414693 |
| | | | | | | |
| 90 | -.393446 | -.403697 | -.413464 | -.422742 | -.431528 | -.439818 |

$$P_\nu(\cos\theta)$$

| $\nu$ $\theta$ | 1.50 | 1.52 | 1.54 | 1.56 | 1.58 | 1.60 |
|---|---|---|---|---|---|---|
| 90 | -.393446 | -.403697 | -.413464 | -.422742 | -.431528 | -.439818 |
| 92 | -.420772 | -.430209 | -.439124 | -.447516 | -.455381 | -.462715 |
| 94 | -.446208 | -.454743 | -.462722 | -.470142 | -.476999 | -.483293 |
| 96 | -.469665 | -.477214 | -.484170 | -.490532 | -.496299 | -.501470 |
| 98 | -.491059 | -.497536 | -.503385 | -.508607 | -.513201 | -.517167 |
| 100 | -.510309 | -.515630 | -.520291 | -.524290 | -.527631 | -.530314 |
| 102 | -.527339 | -.531423 | -.534813 | -.537512 | -.539521 | -.540846 |
| 104 | -.542078 | -.544844 | -.546886 | -.548207 | -.548812 | -.548706 |
| 106 | -.554459 | -.555830 | -.556447 | -.556317 | -.555446 | -.553842 |
| 108 | -.564418 | -.564318 | -.563439 | -.561788 | -.559374 | -.556208 |
| 110 | -.571898 | -.570256 | -.567810 | -.564573 | -.560554 | -.555767 |
| 112 | -.576845 | -.573591 | -.569515 | -.564629 | -.558948 | -.552485 |
| 114 | -.579207 | -.574278 | -.568510 | -.561920 | -.554523 | -.546337 |
| 116 | -.578939 | -.572275 | -.564760 | -.556412 | -.547253 | -.537303 |
| 118 | -.576000 | -.567544 | -.558230 | -.548080 | -.537118 | -.525366 |
| 120 | -.570349 | -.560051 | -.548893 | -.536901 | -.524100 | -.510519 |
| 122 | -.561950 | -.549765 | -.536724 | -.522854 | -.508188 | -.492756 |
| 124 | -.550771 | -.536659 | -.521700 | -.505926 | -.489373 | -.472076 |
| 126 | -.536779 | -.520706 | -.503802 | -.486104 | -.467651 | -.448482 |
| 128 | -.519944 | -.501882 | -.483013 | -.463377 | -.443018 | -.421980 |
| 130 | -.500234 | -.480163 | -.459315 | -.437735 | -.415473 | -.392576 |
| 132 | -.477619 | -.455524 | -.432690 | -.409170 | -.385015 | -.360279 |
| 134 | -.452065 | -.427938 | -.403120 | -.377669 | -.351641 | -.325094 |
| 136 | -.423533 | -.397374 | -.370582 | -.343219 | -.315346 | -.287027 |
| 138 | -.391979 | -.363796 | -.335047 | -.305798 | -.276119 | -.246077 |
| 140 | -.357351 | -.327158 | -.296477 | -.265381 | -.233942 | -.202235 |
| 142 | -.319583 | -.287403 | -.254825 | -.221926 | -.188786 | -.155482 |
| 144 | -.278595 | -.244459 | -.210026 | -.175380 | -.140605 | -.105785 |
| 146 | -.234283 | -.198230 | -.161994 | -.125667 | -.089335 | -.053090 |
| 148 | -.186516 | -.148593 | -.110617 | -.072682 | -.034885 | .002681 |
| 150 | -.135125 | -.095388 | -.055741 | -.016286 | .022875 | .061647 |
| 152 | -.079890 | -.038403 | .002832 | .043709 | .084124 | .123971 |
| 154 | -.020525 | .022638 | .065372 | .107563 | .149102 | .189880 |
| 156 | .043349 | .088107 | .132236 | .175619 | .218141 | .259688 |
| 158 | .112237 | .158497 | .203908 | .248346 | .291692 | .333830 |
| 160 | .186819 | .234480 | .281046 | .326388 | .370382 | .412909 |
| 162 | .268031 | .316982 | .364562 | .410636 | .455080 | .497769 |
| 164 | .357190 | .407308 | .455743 | .502359 | .547025 | .589617 |
| 166 | .456200 | .507350 | .556463 | .603400 | .648028 | .690220 |
| 168 | .567928 | .619960 | .669548 | .716549 | .760827 | .802259 |
| 170 | .696917 | .749664 | .799488 | .846240 | .889788 | .930007 |
| 172 | .850917 | .904188 | .953951 | 1.000059 | 1.042378 | 1.080788 |
| 174 | 1.044667 | 1.098230 | 1.147540 | 1.192450 | 1.232830 | 1.268567 |
| 176 | 1.311607 | 1.365154 | 1.413408 | 1.456227 | 1.493488 | 1.525088 |
| 178 | 1.759267 | 1.812260 | 1.858206 | 1.896969 | 1.928442 | 1.952544 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

| $\nu$ | 1.60 | 1.62 | 1.64 | 1.66 | 1.68 | 1.70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998733 | .998707 | .998681 | .998655 | .998629 | .998602 |
| 4 | .994936 | .994834 | .994730 | .994625 | .994520 | .994414 |
| 6 | .988622 | .988392 | .988160 | .987925 | .987689 | .987450 |
| 8 | .979811 | .979403 | .978992 | .978577 | .978158 | .977735 |
| 10 | .968530 | .967896 | .967257 | .966612 | .965962 | .965305 |
| 12 | .954816 | .953909 | .952995 | .952073 | .951143 | .950204 |
| 14 | .938712 | .937488 | .936254 | .935008 | .933752 | .932486 |
| 16 | .920270 | .918686 | .917088 | .915477 | .913852 | .912214 |
| 18 | .899549 | .897565 | .895564 | .893546 | .891512 | .889461 |
| 20 | .876616 | .874194 | .871752 | .869291 | .866810 | .864310 |
| 22 | .851543 | .848649 | .845733 | .842794 | .839833 | .836849 |
| 24 | .824410 | .821014 | .817593 | .814147 | .810675 | .807178 |
| 26 | .795305 | .791380 | .787428 | .783448 | .779440 | .775404 |
| 28 | .764320 | .759844 | .755338 | .750802 | .746236 | .741641 |
| 30 | .731556 | .726510 | .721432 | .716322 | .711181 | .706009 |
| 32 | .697116 | .691486 | .685823 | .680126 | .674398 | .668637 |
| 34 | .661112 | .654888 | .648630 | .642339 | .636016 | .629661 |
| 36 | .623659 | .616836 | .609980 | .603092 | .596171 | .589219 |
| 38 | .584877 | .577456 | .570002 | .562518 | .555003 | .547458 |
| 40 | .544892 | .536877 | .528832 | .520758 | .512657 | .504529 |
| 42 | .503832 | .495233 | .486607 | .477957 | .469283 | .460587 |
| 44 | .461829 | .452661 | .443471 | .434262 | .425034 | .415790 |
| 46 | .419019 | .409302 | .399570 | .389824 | .380067 | .370300 |
| 48 | .375540 | .365300 | .355052 | .344799 | .334542 | .324283 |
| 50 | .331534 | .320801 | .310069 | .299341 | .288619 | .277905 |
| 52 | .287143 | .275951 | .264772 | .253608 | .242462 | .231336 |
| 54 | .242510 | .230902 | .219318 | .207761 | .196236 | .184743 |
| 56 | .197782 | .185801 | .173859 | .161959 | .150104 | .138298 |
| 58 | .153105 | .140802 | .128553 | .116362 | .104233 | .092170 |
| 60 | .108625 | .096053 | .083554 | .071131 | .058787 | .046527 |
| 62 | .064488 | .051706 | .039017 | .026423 | .013929 | .001538 |
| 64 | .020838 | .007910 | -.004904 | -.017602 | -.030179 | -.042631 |
| 66 | -.022178 | -.035186 | -.048059 | -.060791 | -.073379 | -.085818 |
| 68 | -.064420 | -.077438 | -.090296 | -.102989 | -.115513 | -.127863 |
| 70 | -.105745 | -.118700 | -.131469 | -.144046 | -.156428 | -.168610 |
| 72 | -.146017 | -.158831 | -.171432 | -.183814 | -.195974 | -.207905 |
| 74 | -.185098 | -.197693 | -.210046 | -.222151 | -.234004 | -.245600 |
| 76 | -.222857 | -.235151 | -.247172 | -.258917 | -.270379 | -.281554 |
| 78 | -.259164 | -.271073 | -.282679 | -.293977 | -.304962 | -.315629 |
| 80 | -.293893 | -.305334 | -.316438 | -.327203 | -.337622 | -.347693 |
| 82 | -.326925 | -.337810 | -.348326 | -.358470 | -.368236 | -.377623 |
| 84 | -.358143 | -.368385 | -.378225 | -.387660 | -.396686 | -.405299 |
| 86 | -.387434 | -.396946 | -.406023 | -.414662 | -.422859 | -.430612 |
| 88 | -.414693 | -.423388 | -.431615 | -.439371 | -.446653 | -.453459 |
| 90 | -.439818 | -.447610 | -.454900 | -.461687 | -.467969 | -.473744 |

$$P_\nu(\cos\theta)$$

| $\nu$ / $\theta$ | 1.60 | 1.62 | 1.64 | 1.66 | 1.68 | 1.70 |
|---|---|---|---|---|---|---|
| 90 | -.439818 | -.447610 | -.454900 | -.461687 | -.467969 | -.473744 |
| 92 | -.462715 | -.469518 | -.475786 | -.481520 | -.486718 | -.491381 |
| 94 | -.483293 | -.489023 | -.494187 | -.498786 | -.502820 | -.506289 |
| 96 | -.501470 | -.506044 | -.510023 | -.513408 | -.516199 | -.518400 |
| 98 | -.517167 | -.520507 | -.523222 | -.525316 | -.526791 | -.527651 |
| 100 | -.530314 | -.532342 | -.533720 | -.534451 | -.534539 | -.533991 |
| 102 | -.540846 | -.541490 | -.541459 | -.540758 | -.539394 | -.537375 |
| 104 | -.548706 | -.547896 | -.546389 | -.544193 | -.541316 | -.537768 |
| 106 | -.553842 | -.551513 | -.548468 | -.544718 | -.540273 | -.535144 |
| 108 | -.556208 | -.552300 | -.547661 | -.542303 | -.536241 | -.529487 |
| 110 | -.555767 | -.550224 | -.543939 | -.536927 | -.529205 | -.520788 |
| 112 | -.552485 | -.545258 | -.537282 | -.528576 | -.519158 | -.509047 |
| 114 | -.546337 | -.537382 | -.527677 | -.517243 | -.506100 | -.494272 |
| 116 | -.537303 | -.526583 | -.515117 | -.502928 | -.490041 | -.476481 |
| 118 | -.525366 | -.512852 | -.499600 | -.485638 | -.470994 | -.455697 |
| 120 | -.510519 | -.496187 | -.481133 | -.465388 | -.448984 | -.431952 |
| 122 | -.492756 | -.476591 | -.459726 | -.442197 | -.424037 | -.405283 |
| 124 | -.472076 | -.454071 | -.435396 | -.416088 | -.396188 | -.375735 |
| 126 | -.448482 | -.428638 | -.408161 | -.387093 | -.365477 | -.343356 |
| 128 | -.421980 | -.400307 | -.378046 | -.355244 | -.331946 | -.308201 |
| 130 | -.392576 | -.369094 | -.345077 | -.320576 | -.295642 | -.270327 |
| 132 | -.360279 | -.335015 | -.309280 | -.283127 | -.256612 | -.229791 |
| 134 | -.325094 | -.298088 | -.270682 | -.242934 | -.214906 | -.186656 |
| 136 | -.287027 | -.258327 | -.229307 | -.200034 | -.170569 | -.140979 |
| 138 | -.246077 | -.215740 | -.185177 | -.154457 | -.123647 | -.092816 |
| 140 | -.202235 | -.170331 | -.138305 | -.106230 | -.074178 | -.042220 |
| 142 | -.155482 | -.122092 | -.088696 | -.055369 | -.022189 | .010768 |
| 144 | -.105785 | -.071002 | -.036339 | -.001878 | .032300 | .066118 |
| 146 | -.053090 | -.017018 | .018792 | .054258 | .089293 | .123816 |
| 148 | .002681 | .039925 | .076754 | .113079 | .148813 | .183870 |
| 150 | .061647 | .099932 | .137633 | .174658 | .210917 | .246321 |
| 152 | .123971 | .163150 | .201562 | .239111 | .275703 | .311249 |
| 154 | .189880 | .229792 | .268736 | .306612 | .343327 | .378788 |
| 156 | .259688 | .300153 | .339431 | .377419 | .414023 | .449149 |
| 158 | .333830 | .374648 | .414038 | .451898 | .488131 | .522644 |
| 160 | .412909 | .453854 | .493109 | .530570 | .566141 | .599729 |
| 162 | .497769 | .538588 | .577427 | .614183 | .648761 | .681070 |
| 164 | .589617 | .630018 | .668118 | .703816 | .737018 | .767639 |
| 166 | .690220 | .729861 | .766842 | .801064 | .832439 | .860886 |
| 168 | .802259 | .840727 | .876128 | .908368 | .937362 | .963038 |
| 170 | .930007 | .966785 | 1.000023 | 1.029633 | 1.055540 | 1.077682 |
| 172 | 1.080788 | 1.115184 | 1.145472 | 1.171576 | 1.193433 | 1.210995 |
| 174 | 1.268567 | 1.299563 | 1.325738 | 1.347031 | 1.363394 | 1.374800 |
| 176 | 1.525088 | 1.550946 | 1.571000 | 1.585211 | 1.593559 | 1.596046 |
| 178 | 1.952544 | 1.969222 | 1.978450 | 1.980230 | 1.974592 | 1.961591 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.70 | 1.72 | 1.74 | 1.76 | 1.78 | 1.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998602 | .998575 | .998548 | .998520 | .998493 | .998465 |
| 4 | .994414 | .994306 | .994198 | .994088 | .993978 | .993867 |
| 6 | .987450 | .987209 | .986966 | .986720 | .986473 | .986224 |
| 8 | .977735 | .977309 | .976879 | .976445 | .976007 | .975566 |
| 10 | .965305 | .964643 | .963975 | .963301 | .962622 | .961936 |
| 12 | .950204 | .949257 | .948302 | .947339 | .946368 | .945389 |
| 14 | .932486 | .931208 | .929920 | .928621 | .927311 | .925991 |
| 16 | .912214 | .910562 | .908896 | .907217 | .905525 | .903819 |
| 18 | .889461 | .887394 | .885310 | .883211 | .881095 | .878962 |
| 20 | .864310 | .861790 | .859251 | .856693 | .854116 | .851519 |
| 22 | .836849 | .833843 | .830815 | .827765 | .824694 | .821600 |
| 24 | .807178 | .803657 | .800110 | .796540 | .792945 | .789325 |
| 26 | .775404 | .771341 | .767252 | .763135 | .758992 | .754823 |
| 28 | .741641 | .737016 | .732362 | .727680 | .722970 | .718232 |
| 30 | .706009 | .700806 | .695573 | .690311 | .685019 | .679698 |
| 32 | .668637 | .662846 | .657023 | .651171 | .645288 | .639377 |
| 34 | .629661 | .623274 | .616857 | .610410 | .603933 | .597429 |
| 36 | .589219 | .582237 | .575226 | .568185 | .561117 | .554022 |
| 38 | .547458 | .539886 | .532286 | .524659 | .517008 | .509331 |
| 40 | .504529 | .496376 | .488199 | .480000 | .471778 | .463536 |
| 42 | .460587 | .451870 | .443133 | .434378 | .425607 | .416820 |
| 44 | .415790 | .406530 | .397257 | .387971 | .378676 | .369371 |
| 46 | .370300 | .360525 | .350744 | .340958 | .331169 | .321380 |
| 48 | .324283 | .314025 | .303770 | .293519 | .283275 | .273040 |
| 50 | .277905 | .267203 | .256513 | .245839 | .235182 | .224546 |
| 52 | .231336 | .220232 | .209153 | .198102 | .187082 | .176094 |
| 54 | .184743 | .173287 | .161869 | .150494 | .139163 | .127879 |
| 56 | .138298 | .126543 | .114842 | .103199 | .091616 | .080097 |
| 58 | .092170 | .080174 | .068250 | .056401 | .044631 | .032942 |
| 60 | .046527 | .034354 | .022272 | .010284 | -.001605 | -.013395 |
| 62 | .001538 | -.010744 | -.022916 | -.034972 | -.046911 | -.058726 |
| 64 | -.042631 | -.054953 | -.067141 | -.079192 | -.091102 | -.102866 |
| 66 | -.085818 | -.098104 | -.110233 | -.122201 | -.134002 | -.145635 |
| 68 | -.127863 | -.140035 | -.152025 | -.163828 | -.175440 | -.186857 |
| 70 | -.168610 | -.180587 | -.192355 | -.203909 | -.215246 | -.226362 |
| 72 | -.207905 | -.219603 | -.231065 | -.242286 | -.253261 | -.263987 |
| 74 | -.245600 | -.256935 | -.268004 | -.278804 | -.289329 | -.299576 |
| 76 | -.281554 | -.292438 | -.303027 | -.313316 | -.323302 | -.332981 |
| 78 | -.315629 | -.325974 | -.335994 | -.345684 | -.355040 | -.364061 |
| 80 | -.347693 | -.357411 | -.366772 | -.375774 | -.384412 | -.392684 |
| 82 | -.377623 | -.386625 | -.395239 | -.403463 | -.411293 | -.418728 |
| 84 | -.405299 | -.413497 | -.421276 | -.428634 | -.435570 | -.442080 |
| 86 | -.430612 | -.437919 | -.444776 | -.451182 | -.457137 | -.462637 |
| 88 | -.453459 | -.459788 | -.465638 | -.471009 | -.475899 | -.480308 |
| 90 | -.473744 | -.479013 | -.483773 | -.488026 | -.491771 | -.495010 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 1.70 | 1.72 | 1.74 | 1.76 | 1.78 | 1.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.473744 | -.479013 | -.483773 | -.488026 | -.491771 | -.495010 |
| 92 | -.491381 | -.495507 | -.499098 | -.502155 | -.504680 | -.506673 |
| 94 | -.506289 | -.509196 | -.511542 | -.513329 | -.514560 | -.515238 |
| 96 | -.518400 | -.520013 | -.521041 | -.521488 | -.521359 | -.520657 |
| 98 | -.527651 | -.527901 | -.527544 | -.526586 | -.525034 | -.522894 |
| 100 | -.533991 | -.532811 | -.531007 | -.528586 | -.525555 | -.521923 |
| 102 | -.537375 | -.534706 | -.531399 | -.527461 | -.522902 | -.517733 |
| 104 | -.537768 | -.533557 | -.528696 | -.523194 | -.517065 | -.510320 |
| 106 | -.535144 | -.529344 | -.522885 | -.515781 | -.508047 | -.499697 |
| 108 | -.529487 | -.522056 | -.513964 | -.505226 | -.495860 | -.485883 |
| 110 | -.520788 | -.511693 | -.501939 | -.491544 | -.480529 | -.468912 |
| 112 | -.509047 | -.498263 | -.486827 | -.474760 | -.462086 | -.448826 |
| 114 | -.494272 | -.481781 | -.468652 | -.454908 | -.440576 | -.425680 |
| 116 | -.476481 | -.462275 | -.447450 | -.432033 | -.416052 | -.399538 |
| 118 | -.455697 | -.439776 | -.423262 | -.406185 | -.388578 | -.370472 |
| | | | | | | |
| 120 | -.431952 | -.414326 | -.396140 | -.377428 | -.358224 | -.338566 |
| 122 | -.405283 | -.385972 | -.366141 | -.345828 | -.325072 | -.303910 |
| 124 | -.375735 | -.354769 | -.333331 | -.311463 | -.289206 | -.266604 |
| 126 | -.343356 | -.320776 | -.297780 | -.274413 | -.250722 | -.226751 |
| 128 | -.308201 | -.284058 | -.259563 | -.234767 | -.209718 | -.184465 |
| 130 | -.270327 | -.244682 | -.218761 | -.192615 | -.166298 | -.139861 |
| 132 | -.229791 | -.202721 | -.175456 | -.148054 | -.120569 | -.093059 |
| 134 | -.186656 | -.158245 | -.129732 | -.101178 | -.072641 | -.044181 |
| 136 | -.140979 | -.111326 | -.081674 | -.052086 | -.022624 | .006648 |
| 138 | -.092816 | -.062032 | -.031362 | -.000871 | .029374 | .059309 |
| 140 | -.042220 | -.010429 | .021125 | .052374 | .083249 | .113682 |
| 142 | .010768 | .043428 | .075719 | .107567 | .138901 | .169653 |
| 144 | .066118 | .099496 | .132359 | .164632 | .196242 | .227119 |
| 146 | .123816 | .157745 | .191002 | .223510 | .255195 | .285986 |
| 148 | .183870 | .218167 | .251624 | .284161 | .315704 | .346180 |
| | | | | | | |
| 150 | .246321 | .280786 | .314228 | .346570 | .377734 | .407649 |
| 152 | .311249 | .345661 | .378857 | .410758 | .441287 | .470373 |
| 154 | .378788 | .412907 | .445602 | .476793 | .506407 | .534372 |
| 156 | .449149 | .482709 | .514622 | .544809 | .573198 | .599723 |
| 158 | .522644 | .555350 | .586169 | .615025 | .641850 | .666580 |
| 160 | .599729 | .631251 | .660627 | .687786 | .712664 | .735203 |
| 162 | .681070 | .711030 | .738566 | .763613 | .786110 | .806008 |
| 164 | .767639 | .795602 | .820838 | .843288 | .862901 | .879636 |
| 166 | .860886 | .886333 | .908722 | .928000 | .944129 | .957077 |
| 168 | .963038 | .985335 | 1.004202 | 1.019600 | 1.031502 | 1.039891 |
| 170 | 1.077682 | 1.096009 | 1.110484 | 1.121084 | 1.127797 | 1.130627 |
| 172 | 1.210995 | 1.224227 | 1.233111 | 1.237645 | 1.237838 | 1.233717 |
| 174 | 1.374800 | 1.381239 | 1.382715 | 1.379255 | 1.370897 | 1.357701 |
| 176 | 1.596046 | 1.592696 | 1.583552 | 1.568679 | 1.548160 | 1.522100 |
| 178 | 1.961591 | 1.941309 | 1.913858 | 1.879371 | 1.838011 | 1.789961 |
| | | | | | | |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 1.80 | 1.82 | 1.84 | 1.86 | 1.88 | 1.90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998465 | .998437 | .998408 | .998380 | .998351 | .998322 |
| 4 | .993867 | .993754 | .993641 | .993527 | .993412 | .993296 |
| 6 | .986224 | .985972 | .985718 | .985462 | .985204 | .984944 |
| 8 | .975566 | .975121 | .974672 | .974219 | .973763 | .973303 |
| 10 | .961936 | .961246 | .960549 | .959846 | .959138 | .958424 |
| 12 | .945389 | .944402 | .943407 | .942404 | .941393 | .940374 |
| 14 | .925991 | .924661 | .923319 | .921967 | .920605 | .919232 |
| 16 | .903819 | .902100 | .900368 | .898622 | .896864 | .895092 |
| 18 | .878962 | .876814 | .874649 | .872469 | .870272 | .868060 |
| 20 | .851519 | .848904 | .846270 | .843617 | .840946 | .838257 |
| 22 | .821600 | .818486 | .815349 | .812192 | .809013 | .805813 |
| 24 | .789325 | .785682 | .782015 | .778325 | .774611 | .770874 |
| 26 | .754823 | .750628 | .746407 | .742161 | .737890 | .733593 |
| 28 | .718232 | .713466 | .708674 | .703854 | .699008 | .694136 |
| 30 | .679698 | .674349 | .668972 | .663568 | .658136 | .652677 |
| 32 | .639377 | .633437 | .627468 | .621473 | .615450 | .609401 |
| 34 | .597429 | .590896 | .584336 | .577749 | .571136 | .564498 |
| 36 | .554022 | .546901 | .539754 | .532582 | .525387 | .518169 |
| 38 | .509331 | .501632 | .493910 | .486166 | .478402 | .470618 |
| 40 | .463536 | .455274 | .446994 | .438697 | .430384 | .422056 |
| 42 | .416820 | .408019 | .399205 | .390379 | .381544 | .372700 |
| 44 | .369371 | .360059 | .350741 | .341418 | .332093 | .322767 |
| 46 | .321380 | .311591 | .301805 | .292023 | .282248 | .272481 |
| 48 | .273040 | .262815 | .252603 | .242406 | .232225 | .222063 |
| 50 | .224546 | .213931 | .203341 | .192777 | .182243 | .171739 |
| 52 | .176094 | .165141 | .154226 | .143351 | .132519 | .121732 |
| 54 | .127879 | .116645 | .105465 | .094339 | .083272 | .072265 |
| 56 | .080097 | .068645 | .057262 | .045951 | .034716 | .023559 |
| 58 | .032942 | .021338 | .009821 | -.001603 | -.012935 | -.024169 |
| 60 | -.013395 | -.025080 | -.036656 | -.048122 | -.059473 | -.070707 |
| 62 | -.058726 | -.070416 | -.081976 | -.093404 | -.104695 | -.115846 |
| 64 | -.102866 | -.114482 | -.125946 | -.137253 | -.148400 | -.159385 |
| 66 | -.145635 | -.157095 | -.168377 | -.179479 | -.190397 | -.201128 |
| 68 | -.186857 | -.198075 | -.209091 | -.219901 | -.230500 | -.240887 |
| 70 | -.226362 | -.237252 | -.247913 | -.258341 | -.268532 | -.278484 |
| 72 | -.263987 | -.274460 | -.284676 | -.294632 | -.304324 | -.313749 |
| 74 | -.299576 | -.309542 | -.319223 | -.328615 | -.337716 | -.346522 |
| 76 | -.332981 | -.342349 | -.351404 | -.360141 | -.368559 | -.376654 |
| 78 | -.364061 | -.372741 | -.381079 | -.389071 | -.396715 | -.404009 |
| 80 | -.392684 | -.400586 | -.408117 | -.415275 | -.422056 | -.428460 |
| 82 | -.418728 | -.425764 | -.432400 | -.438635 | -.444466 | -.449894 |
| 84 | -.442080 | -.448163 | -.453819 | -.459046 | -.463843 | -.468211 |
| 86 | -.462637 | -.467684 | -.472276 | -.476413 | -.480095 | -.483324 |
| 88 | -.480308 | -.484236 | -.487685 | -.490654 | -.493145 | -.495160 |
| 90 | -.495010 | -.497743 | -.499973 | -.501701 | -.502930 | -.503661 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 1.80 | 1.82 | 1.84 | 1.86 | 1.88 | 1.90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.495010 | -.497743 | -.499973 | -.501701 | -.502930 | -.503661 |
| 92 | -.506673 | -.508139 | -.509079 | -.509497 | -.509397 | -.508782 |
| 94 | -.515238 | -.515368 | -.514953 | -.513999 | -.512510 | -.510493 |
| 96 | -.520657 | -.519389 | -.517561 | -.515178 | -.512247 | -.508777 |
| 98 | -.522894 | -.520172 | -.516877 | -.513016 | -.508599 | -.503634 |
| 100 | -.521923 | -.517699 | -.512892 | -.507512 | -.501570 | -.495077 |
| 102 | -.517733 | -.511964 | -.505607 | -.498675 | -.491180 | -.483134 |
| 104 | -.510320 | -.502974 | -.495038 | -.486529 | -.477460 | -.467848 |
| 106 | -.499697 | -.490747 | -.481212 | -.471110 | -.460459 | -.449275 |
| 108 | -.485883 | -.475313 | -.464168 | -.452469 | -.440234 | -.427484 |
| 110 | -.468912 | -.456715 | -.443959 | -.430666 | -.416858 | -.402559 |
| 112 | -.448826 | -.435005 | -.420646 | -.405775 | -.390417 | -.374597 |
| 114 | -.425680 | -.410248 | -.394307 | -.377883 | -.361007 | -.343705 |
| 116 | -.399538 | -.382518 | -.365024 | -.347087 | -.328736 | -.310004 |
| 118 | -.370472 | -.351900 | -.332896 | -.313493 | -.293724 | -.273626 |
| 120 | -.338566 | -.318488 | -.298026 | -.277218 | -.256101 | -.234712 |
| 122 | -.303910 | -.282383 | -.260530 | -.238391 | -.216006 | -.193415 |
| 124 | -.266604 | -.243697 | -.220530 | -.197145 | -.173585 | -.149894 |
| 126 | -.226751 | -.202548 | -.178156 | -.153624 | -.128995 | -.104317 |
| 128 | -.184465 | -.159058 | -.133545 | -.107975 | -.082398 | -.056861 |
| 130 | -.139861 | -.113357 | -.086838 | -.060355 | -.033960 | -.007704 |
| 132 | -.093059 | -.065577 | -.038180 | -.010922 | .016144 | .042965 |
| 134 | -.044181 | -.015855 | .012277 | .040162 | .067742 | .094962 |
| 136 | .006648 | .035672 | .064387 | .092734 | .120655 | .148094 |
| 138 | .059309 | .088872 | .118000 | .146631 | .174707 | .202170 |
| 140 | .113682 | .143609 | .172966 | .201690 | .229722 | .257001 |
| 142 | .169653 | .199756 | .229145 | .257756 | .285528 | .312402 |
| 144 | .227119 | .257193 | .286401 | .314676 | .341959 | .368192 |
| 146 | .285986 | .315812 | .344608 | .372311 | .398859 | .424197 |
| 148 | .346180 | .375520 | .403659 | .430533 | .456084 | .480256 |
| 150 | .407649 | .436247 | .463462 | .489233 | .513505 | .536223 |
| 152 | .470373 | .497949 | .523953 | .548326 | .571015 | .591971 |
| 154 | .534372 | .560625 | .585106 | .607760 | .628538 | .647397 |
| 156 | .599723 | .624321 | .646938 | .667524 | .686035 | .702433 |
| 158 | .666580 | .689158 | .709535 | .727668 | .743518 | .757058 |
| 160 | .735203 | .755353 | .773070 | .788319 | .801072 | .811309 |
| 162 | .806008 | .823264 | .837845 | .849723 | .858882 | .865311 |
| 164 | .879636 | .893459 | .904349 | .912290 | .917277 | .919315 |
| 166 | .957077 | .966824 | .973361 | .976687 | .976813 | .973761 |
| 168 | 1.039891 | 1.044764 | 1.046127 | 1.043998 | 1.038407 | 1.029394 |
| 170 | 1.130627 | 1.129588 | 1.124708 | 1.116027 | 1.103598 | 1.087486 |
| 172 | 1.233717 | 1.225323 | 1.212709 | 1.195944 | 1.175112 | 1.150307 |
| 174 | 1.357701 | 1.339739 | 1.317103 | 1.289900 | 1.258250 | 1.222291 |
| 176 | 1.522100 | 1.490622 | 1.453869 | 1.412002 | 1.365197 | 1.313651 |
| 178 | 1.789961 | 1.735431 | 1.674654 | 1.607884 | 1.535395 | 1.457484 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$P_\nu(\cos\theta)$$

| $\nu$ | 1.90 | 1.92 | 1.94 | 1.96 | 1.98 | 2.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998322 | .998292 | .998263 | .998233 | .998203 | .998173 |
| 4 | .993296 | .993179 | .993061 | .992942 | .992822 | .992701 |
| 6 | .984944 | .984681 | .984417 | .984150 | .983881 | .983610 |
| 8 | .973303 | .972839 | .972371 | .971900 | .971425 | .970946 |
| 10 | .958424 | .957705 | .956979 | .956248 | .955512 | .954769 |
| 12 | .940374 | .939347 | .938312 | .937269 | .936218 | .935159 |
| 14 | .919232 | .917848 | .916455 | .915050 | .913635 | .912210 |
| 16 | .895092 | .893306 | .891508 | .889697 | .887873 | .886036 |
| 18 | .868060 | .865832 | .863588 | .861328 | .859053 | .856762 |
| 20 | .838257 | .835548 | .832822 | .830077 | .827314 | .824533 |
| 22 | .805813 | .802593 | .799351 | .796089 | .792807 | .789504 |
| 24 | .770874 | .767114 | .763331 | .759526 | .755698 | .751848 |
| 26 | .733593 | .729272 | .724926 | .720557 | .716163 | .711746 |
| 28 | .694136 | .689238 | .684314 | .679366 | .674392 | .669394 |
| 30 | .652677 | .647192 | .641682 | .636146 | .630585 | .625000 |
| 32 | .609401 | .603326 | .597226 | .591101 | .584951 | .578778 |
| 34 | .564498 | .557836 | .551150 | .544440 | .537708 | .530955 |
| 36 | .518169 | .510929 | .503667 | .496385 | .489083 | .481762 |
| 38 | .470618 | .462816 | .454996 | .447160 | .439308 | .431441 |
| 40 | .422056 | .413715 | .405361 | .396996 | .388620 | .380236 |
| 42 | .372700 | .363849 | .354991 | .346129 | .337263 | .328396 |
| 44 | .322767 | .313442 | .304118 | .294798 | .285483 | .276174 |
| 46 | .272481 | .262723 | .252977 | .243244 | .233526 | .223825 |
| 48 | .222063 | .211922 | .201803 | .191710 | .181642 | .171603 |
| 50 | .171739 | .161269 | .150834 | .140436 | .130079 | .119763 |
| 52 | .121732 | .110993 | .100303 | .089666 | .079084 | .068558 |
| 54 | .072265 | .061322 | .050445 | .039637 | .028900 | .018237 |
| 56 | .023559 | .012483 | .001491 | -.009414 | -.020230 | -.030954 |
| 58 | -.024169 | -.035303 | -.046333 | -.057258 | -.068074 | -.078778 |
| 60 | -.070707 | -.081819 | -.092808 | -.103669 | -.114401 | -.124999 |
| 62 | -.115846 | -.126855 | -.137717 | -.148429 | -.158989 | -.169394 |
| 64 | -.159385 | -.170203 | -.180851 | -.191326 | -.201625 | -.211746 |
| 66 | -.201128 | -.211667 | -.222012 | -.232158 | -.242105 | -.251847 |
| 68 | -.240887 | -.251056 | -.261006 | -.270733 | -.280233 | -.289504 |
| 70 | -.278484 | -.288192 | -.297654 | -.306867 | -.315827 | -.324533 |
| 72 | -.313749 | -.322903 | -.331785 | -.340390 | -.348717 | -.356762 |
| 74 | -.346522 | -.355030 | -.363238 | -.371143 | -.378743 | -.386036 |
| 76 | -.376654 | -.384424 | -.391867 | -.398980 | -.405762 | -.412210 |
| 78 | -.404009 | -.410950 | -.417538 | -.423769 | -.429643 | -.435159 |
| 80 | -.428460 | -.434484 | -.440128 | -.445391 | -.450271 | -.454769 |
| 82 | -.449894 | -.454916 | -.459532 | -.463742 | -.467547 | -.470946 |
| 84 | -.468211 | -.472148 | -.475656 | -.478735 | -.481386 | -.483610 |
| 86 | -.483324 | -.486099 | -.488423 | -.490296 | -.491721 | -.492701 |
| 88 | -.495160 | -.496701 | -.497770 | -.498369 | -.498502 | -.498173 |
| 90 | -.503661 | -.503900 | -.503649 | -.502912 | -.501694 | -.500000 |

$$P_\nu(\cos\theta)$$

| ν θ | 1.90 | 1.92 | 1.94 | 1.96 | 1.98 | 2.00 |
|---|---|---|---|---|---|---|
| 90 | -.503661 | -.503900 | -.503649 | -.502912 | -.501694 | -.500000 |
| 92 | -.508782 | -.507658 | -.506029 | -.503902 | -.501280 | -.498173 |
| 94 | -.510493 | -.507952 | -.504895 | -.501329 | -.497262 | -.492701 |
| 96 | -.508777 | -.504774 | -.500246 | -.495204 | -.489655 | -.483610 |
| 98 | -.503634 | -.498130 | -.492099 | -.485550 | -.478495 | -.470946 |
| 100 | -.495077 | -.488044 | -.480484 | -.472410 | -.463833 | -.454769 |
| 102 | -.483134 | -.474553 | -.465450 | -.455839 | -.445737 | -.435159 |
| 104 | -.467848 | -.457708 | -.447057 | -.435912 | -.424290 | -.412210 |
| 106 | -.449275 | -.437577 | -.425385 | -.412717 | -.399594 | -.386036 |
| 108 | -.427484 | -.414240 | -.400524 | -.386358 | -.371763 | -.356762 |
| 110 | -.402559 | -.387793 | -.372582 | -.356952 | -.340927 | -.324533 |
| 112 | -.374597 | -.358341 | -.341677 | -.324631 | -.307231 | -.289504 |
| 114 | -.343705 | -.326007 | -.307942 | -.289541 | -.270832 | -.251847 |
| 116 | -.310004 | -.290922 | -.271523 | -.251839 | -.231902 | -.211746 |
| 118 | -.273626 | -.253231 | -.232576 | -.211694 | -.190622 | -.169394 |
| | | | | | | |
| 120 | -.234712 | -.213088 | -.191268 | -.169287 | -.147185 | -.124999 |
| 122 | -.193415 | -.170658 | -.147776 | -.124808 | -.101796 | -.078778 |
| 124 | -.149894 | -.126113 | -.102286 | -.078456 | -.054665 | -.030954 |
| 126 | -.104317 | -.079635 | -.054994 | -.030438 | -.006013 | .018237 |
| 128 | -.056861 | -.031412 | -.006099 | .019030 | .043931 | .068558 |
| 130 | -.007704 | .018362 | .044190 | .069732 | .094939 | .119763 |
| 132 | .042965 | .069489 | .095665 | .121441 | .146770 | .171603 |
| 134 | .094962 | .121768 | .148108 | .173931 | .199186 | .223825 |
| 136 | .148094 | .174995 | .201304 | .226971 | .251944 | .276174 |
| 138 | .202170 | .228964 | .255035 | .280330 | .304800 | .328396 |
| 140 | .257001 | .283474 | .309084 | .333781 | .357513 | .380236 |
| 142 | .312402 | .338324 | .363238 | .387094 | .409843 | .431441 |
| 144 | .368192 | .393318 | .417286 | .440046 | .461553 | .481762 |
| 146 | .424197 | .448269 | .471026 | .492421 | .512410 | .530955 |
| 148 | .480256 | .502999 | .524264 | .544007 | .562191 | .578778 |
| | | | | | | |
| 150 | .536223 | .557341 | .576815 | .594605 | .610677 | .625000 |
| 152 | .591971 | .611149 | .628513 | .644026 | .657661 | .669394 |
| 154 | .647397 | .664297 | .679207 | .692098 | .702950 | .711746 |
| 156 | .702433 | .716687 | .728772 | .738668 | .746362 | .751848 |
| 158 | .757058 | .768262 | .777115 | .783607 | .787736 | .789504 |
| 160 | .811309 | .819015 | .824184 | .826820 | .826931 | .824533 |
| 162 | .865311 | .869010 | .869985 | .868252 | .863834 | .856762 |
| 164 | .919315 | .918416 | .914604 | .907909 | .898370 | .886036 |
| 166 | .973761 | .967559 | .958249 | .945879 | .930510 | .912210 |
| 168 | 1.029394 | 1.017010 | 1.001317 | .982388 | .960304 | .935159 |
| 170 | 1.087486 | 1.067768 | 1.044533 | 1.017879 | .987917 | .954769 |
| 172 | 1.150307 | 1.121640 | 1.089230 | 1.053213 | 1.013733 | .970946 |
| 174 | 1.222291 | 1.182174 | 1.138063 | 1.090136 | 1.038585 | .983610 |
| 176 | 1.313651 | 1.257575 | 1.197194 | 1.132750 | 1.064496 | .992701 |
| 178 | 1.457484 | 1.374465 | 1.286669 | 1.194444 | 1.098153 | .998173 |
| | | | | | | |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | 1.000000 |

$$P_\nu(\cos \theta)$$

| $\nu$ | 2.00 | 2.02 | 2.04 | 2.06 | 2.08 | 2.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998173 | .998142 | .998111 | .998080 | .998049 | .998018 |
| 4 | .992701 | .992579 | .992456 | .992332 | .992207 | .992081 |
| 6 | .983610 | .983337 | .983062 | .982785 | .982505 | .982223 |
| 8 | .970946 | .970463 | .969977 | .969487 | .968993 | .968496 |
| 10 | .954769 | .954021 | .953267 | .952508 | .951743 | .950972 |
| 12 | .935159 | .934092 | .933017 | .931935 | .930844 | .929746 |
| 14 | .912210 | .910775 | .909329 | .907873 | .906407 | .904930 |
| 16 | .886036 | .884186 | .882323 | .880447 | .878558 | .876657 |
| 18 | .856762 | .854456 | .852135 | .849798 | .847445 | .845078 |
| 20 | .824533 | .821734 | .818917 | .816083 | .813231 | .810361 |
| 22 | .789504 | .786182 | .782839 | .779476 | .776094 | .772692 |
| 24 | .751848 | .747975 | .744082 | .740166 | .736229 | .732272 |
| 26 | .711746 | .707305 | .702841 | .698355 | .693846 | .689315 |
| 28 | .669394 | .664372 | .659327 | .654258 | .649166 | .644051 |
| 30 | .625000 | .619390 | .613757 | .608101 | .602422 | .596721 |
| 32 | .578778 | .572582 | .566363 | .560123 | .553861 | .547578 |
| 34 | .530955 | .524180 | .517384 | .510569 | .503735 | .496883 |
| 36 | .481762 | .474424 | .467068 | .459696 | .452308 | .444906 |
| 38 | .431441 | .423561 | .415668 | .407764 | .399849 | .391924 |
| 40 | .380236 | .371843 | .363444 | .355040 | .346631 | .338219 |
| 42 | .328396 | .319528 | .310661 | .301795 | .292934 | .284077 |
| 44 | .276174 | .266874 | .257583 | .248304 | .239037 | .229785 |
| 46 | .223825 | .214142 | .204480 | .194840 | .185223 | .175632 |
| 48 | .171603 | .161595 | .151619 | .141678 | .131772 | .121905 |
| 50 | .119763 | .109492 | .099267 | .089090 | .078964 | .068890 |
| 52 | .068558 | .058092 | .047688 | .037347 | .027073 | .016868 |
| 54 | .018237 | .007650 | -.002858 | -.013284 | -.023628 | -.033885 |
| 56 | -.030954 | -.041584 | -.052116 | -.062548 | -.072878 | -.083102 |
| 58 | -.078778 | -.089367 | -.099839 | -.110190 | -.120419 | -.130522 |
| 60 | -.124999 | -.135462 | -.145785 | -.155967 | -.166004 | -.175895 |
| 62 | -.169394 | -.179640 | -.189725 | -.199645 | -.209398 | -.218981 |
| 64 | -.211746 | -.221683 | -.231436 | -.241000 | -.250374 | -.259555 |
| 66 | -.251847 | -.261383 | -.270709 | -.279823 | -.288721 | -.297402 |
| 68 | -.289504 | -.298543 | -.307348 | -.315914 | -.324241 | -.332326 |
| 70 | -.324533 | -.332980 | -.341168 | -.349092 | -.356752 | -.364145 |
| 72 | -.356762 | -.364524 | -.372000 | -.379188 | -.386086 | -.392692 |
| 74 | -.386036 | -.393019 | -.399690 | -.406049 | -.412093 | -.417821 |
| 76 | -.412210 | -.418324 | -.424101 | -.429540 | -.434642 | -.439404 |
| 78 | -.435159 | -.440315 | -.445110 | -.449545 | -.453619 | -.457331 |
| 80 | -.454769 | -.458883 | -.462615 | -.465963 | -.468929 | -.471513 |
| 82 | -.470946 | -.473939 | -.476528 | -.478714 | -.480497 | -.481881 |
| 84 | -.483610 | -.485409 | -.486783 | -.487736 | -.488269 | -.488386 |
| 86 | -.492701 | -.493236 | -.493330 | -.492987 | -.492210 | -.491003 |
| 88 | -.498173 | -.497384 | -.496140 | -.494446 | -.492306 | -.489725 |
| 90 | -.500000 | -.497833 | -.495201 | -.492108 | -.488562 | -.484568 |

$$P_\nu(\cos\theta)$$

| $\nu$ / $\theta$ | 2.00 | 2.02 | 2.04 | 2.06 | 2.08 | 2.10 |
|---|---|---|---|---|---|---|
| 90 | -.500000 | -.497833 | -.495201 | -.492108 | -.488562 | -.484568 |
| 92 | -.498173 | -.494584 | -.490522 | -.485993 | -.481006 | -.475569 |
| 94 | -.492701 | -.487653 | -.482129 | -.476137 | -.469686 | -.462787 |
| 96 | -.483610 | -.477078 | -.470070 | -.462597 | -.454669 | -.446299 |
| 98 | -.470946 | -.462913 | -.454410 | -.445449 | -.436043 | -.426206 |
| 100 | -.454769 | -.445230 | -.435231 | -.424788 | -.413914 | -.402626 |
| 102 | -.435159 | -.424120 | -.412637 | -.400728 | -.388409 | -.375699 |
| 104 | -.412210 | -.399689 | -.386746 | -.373401 | -.359672 | -.345581 |
| 106 | -.386036 | -.372062 | -.357695 | -.342956 | -.327866 | -.312447 |
| 108 | -.356762 | -.341379 | -.325636 | -.309558 | -.293168 | -.276491 |
| 110 | -.324533 | -.307794 | -.290738 | -.273389 | -.255774 | -.237919 |
| 112 | -.289504 | -.271479 | -.253183 | -.234645 | -.215893 | -.196956 |
| 114 | -.251847 | -.232616 | -.213168 | -.193536 | -.173749 | -.153838 |
| 116 | -.211746 | -.191402 | -.170904 | -.150285 | -.129578 | -.108815 |
| 118 | -.169394 | -.148046 | -.126612 | -.105128 | -.083629 | -.062149 |
| 120 | -.124999 | -.102767 | -.080524 | -.058310 | -.036160 | -.014110 |
| 122 | -.078778 | -.055794 | -.032884 | -.010086 | .012560 | .035018 |
| 124 | -.030954 | -.007366 | .016058 | .039279 | .062257 | .084951 |
| 126 | .018237 | .042271 | .066045 | .089517 | .112646 | .135393 |
| 128 | .068558 | .092866 | .116810 | .140349 | .163440 | .186043 |
| 130 | .119763 | .144161 | .168086 | .191495 | .214347 | .236599 |
| 132 | .171603 | .195894 | .219598 | .242670 | .265069 | .286754 |
| 134 | .223825 | .247801 | .271070 | .293587 | .315311 | .336202 |
| 136 | .276174 | .299616 | .322225 | .343957 | .364773 | .384634 |
| 138 | .328396 | .351072 | .372785 | .393494 | .413159 | .431744 |
| 140 | .380236 | .401903 | .422474 | .441908 | .460170 | .477226 |
| 142 | .431441 | .451845 | .471015 | .488915 | .505513 | .520777 |
| 144 | .481762 | .500636 | .518137 | .534232 | .548894 | .562096 |
| 146 | .530955 | .548018 | .563568 | .577578 | .590023 | .600882 |
| 148 | .578778 | .593738 | .607045 | .618676 | .628611 | .636839 |
| 150 | .625000 | .637549 | .648304 | .657249 | .664372 | .669668 |
| 152 | .669394 | .679207 | .687087 | .693024 | .697017 | .699069 |
| 154 | .711746 | .718476 | .723136 | .725727 | .726256 | .724734 |
| 156 | .751848 | .755124 | .756198 | .755079 | .751787 | .746345 |
| 158 | .789504 | .788924 | .786012 | .780793 | .773296 | .763559 |
| 160 | .824533 | .819650 | .812314 | .802563 | .790440 | .775998 |
| 162 | .856762 | .847076 | .834821 | .820052 | .802831 | .783225 |
| 164 | .886036 | .870964 | .853218 | .832871 | .810004 | .784705 |
| 166 | .912210 | .891056 | .867135 | .840539 | .811372 | .779742 |
| 168 | .935159 | .907053 | .876098 | .842413 | .806125 | .767370 |
| 170 | .954769 | .918565 | .879445 | .837559 | .793063 | .746125 |
| 172 | .970946 | .925019 | .876130 | .824464 | .770214 | .713585 |
| 174 | .983610 | .925426 | .864256 | .800332 | .733896 | .665196 |
| 176 | .992701 | .917641 | .839606 | .758893 | .675810 | .590669 |
| 178 | .998173 | .894892 | .788710 | .680035 | .569283 | .456877 |
| 180 | 1.000000 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_{\nu}(\cos \theta)$$

| ν θ | 2.10 | 2.12 | 2.14 | 2.16 | 2.18 | 2.20 |
|---|---|---|---|---|---|---|
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .998018 | .997986 | .997954 | .997921 | .997889 | .997856 |
| 4 | .992081 | .991955 | .991827 | .991698 | .991569 | .991438 |
| 6 | .982223 | .981940 | .981654 | .981366 | .981076 | .980783 |
| 8 | .968496 | .967995 | .967490 | .966981 | .966469 | .965953 |
| 10 | .950972 | .950196 | .949414 | .948626 | .947833 | .947034 |
| 12 | .929746 | .928640 | .927526 | .926404 | .925274 | .924137 |
| 14 | .904930 | .903443 | .901946 | .900439 | .898921 | .897394 |
| 16 | .876657 | .874743 | .872816 | .870877 | .868926 | .866961 |
| 18 | .845078 | .842696 | .840298 | .837886 | .835458 | .833016 |
| 20 | .810361 | .807474 | .804570 | .801649 | .798710 | .795755 |
| 22 | .772692 | .769271 | .765830 | .762371 | .758892 | .755395 |
| 24 | .732272 | .728292 | .724293 | .720272 | .716232 | .712171 |
| 26 | .689315 | .684761 | .680186 | .675590 | .670972 | .666334 |
| 28 | .644051 | .638914 | .633755 | .628574 | .623372 | .618150 |
| 30 | .596721 | .590998 | .585254 | .579489 | .573704 | .567898 |
| 32 | .547578 | .541275 | .534952 | .528610 | .522250 | .515871 |
| 34 | .496883 | .490013 | .483126 | .476223 | .469304 | .462370 |
| 36 | .444906 | .437490 | .430061 | .422620 | .415168 | .407705 |
| 38 | .391924 | .383991 | .376050 | .368103 | .360150 | .352192 |
| 40 | .338219 | .329805 | .321390 | .312976 | .304563 | .296152 |
| 42 | .284077 | .275226 | .266383 | .257548 | .248724 | .239911 |
| 44 | .229785 | .220548 | .211329 | .202129 | .192949 | .183791 |
| 46 | .175632 | .166068 | .156532 | .147028 | .137555 | .128116 |
| 48 | .121905 | .112078 | .102293 | .092552 | .082856 | .073208 |
| 50 | .068890 | .058871 | .048909 | .039005 | .029162 | .019382 |
| 52 | .016868 | .006733 | -.003327 | -.013314 | -.023223 | -.033053 |
| 54 | -.033885 | -.044054 | -.054132 | -.064116 | -.074006 | -.083797 |
| 56 | -.083102 | -.093219 | -.103225 | -.113120 | -.122899 | -.132561 |
| 58 | -.130522 | -.140497 | -.150342 | -.160053 | -.169629 | -.179066 |
| 60 | -.175895 | -.185635 | -.195223 | -.204657 | -.213933 | -.223049 |
| 62 | -.218981 | -.228392 | -.237628 | -.246686 | -.255564 | -.264260 |
| 64 | -.259555 | -.268539 | -.277325 | -.285910 | -.294292 | -.302469 |
| 66 | -.297402 | -.305863 | -.314102 | -.322115 | -.329902 | -.337461 |
| 68 | -.332326 | -.340166 | -.347760 | -.355105 | -.362199 | -.369041 |
| 70 | -.364145 | -.371268 | -.378121 | -.384701 | -.391007 | -.397038 |
| 72 | -.392692 | -.399005 | -.405023 | -.410746 | -.416171 | -.421298 |
| 74 | -.417821 | -.423233 | -.428327 | -.433102 | -.437557 | -.441693 |
| 76 | -.439404 | -.443827 | -.447910 | -.451652 | -.455055 | -.458117 |
| 78 | -.457331 | -.460682 | -.463673 | -.466304 | -.468575 | -.470488 |
| 80 | -.471513 | -.473716 | -.475540 | -.476985 | -.478054 | -.478748 |
| 82 | -.481881 | -.482865 | -.483454 | -.483648 | -.483451 | -.482865 |
| 84 | -.488386 | -.488089 | -.487382 | -.486267 | -.484750 | -.482833 |
| 86 | -.491003 | -.489370 | -.487315 | -.484843 | -.481959 | -.478669 |
| 88 | -.489725 | -.486709 | -.483264 | -.479396 | -.475111 | -.470415 |
| 90 | -.484568 | -.480134 | -.475266 | -.469973 | -.464262 | -.458142 |

| $\nu$ / $\theta$ | 2.10 | 2.12 | 2.14 | 2.16 | 2.18 | 2.20 |
|---|---|---|---|---|---|---|
| 90 | -.484568 | -.480134 | -.475266 | -.469973 | -.464262 | -.458141 |
| 92 | -.475569 | -.469691 | -.463379 | -.456644 | -.449494 | -.441940 |
| 94 | -.462787 | -.455449 | -.447683 | -.439499 | -.430910 | -.421927 |
| 96 | -.446299 | -.437499 | -.428280 | -.418656 | -.408639 | -.398243 |
| 98 | -.426206 | -.415952 | -.405294 | -.394249 | -.382829 | -.371052 |
| 100 | -.402626 | -.390939 | -.378871 | -.366436 | -.353653 | -.340537 |
| 102 | -.375699 | -.362614 | -.349174 | -.335396 | -.321301 | -.306906 |
| 104 | -.345581 | -.331145 | -.316387 | -.301327 | -.285985 | -.270383 |
| 106 | -.312447 | -.296722 | -.280714 | -.264444 | -.247935 | -.231212 |
| 108 | -.276491 | -.259551 | -.242372 | -.224980 | -.207399 | -.189655 |
| 110 | -.237919 | -.219852 | -.201598 | -.183185 | -.164640 | -.145988 |
| 112 | -.196956 | -.177863 | -.158643 | -.139323 | -.119934 | -.100503 |
| 114 | -.153838 | -.133835 | -.113769 | -.093672 | -.073573 | -.053504 |
| 116 | -.108815 | -.088030 | -.067254 | -.046520 | -.025860 | -.005306 |
| 118 | -.062149 | -.040723 | -.019385 | .001830 | .022892 | .043765 |
| 120 | -.014110 | .007801 | .029541 | .051073 | .072363 | .093377 |
| 122 | .035018 | .057250 | .079219 | .100889 | .122225 | .143191 |
| 124 | .084951 | .107324 | .129338 | .150957 | .172143 | .192863 |
| 126 | .135393 | .157717 | .179581 | .200947 | .221780 | .242045 |
| 128 | .186043 | .208118 | .229626 | .250531 | .270797 | .290390 |
| 130 | .236599 | .258213 | .279150 | .299375 | .318851 | .337547 |
| 132 | .286754 | .307686 | .327828 | .347145 | .365602 | .383169 |
| 134 | .336202 | .356222 | .375336 | .393509 | .410711 | .426911 |
| 136 | .384634 | .403504 | .421348 | .438137 | .453839 | .468430 |
| 138 | .431744 | .449216 | .465543 | .480698 | .494654 | .507388 |
| 140 | .477226 | .493046 | .507601 | .520867 | .532823 | .543450 |
| 142 | .520777 | .534682 | .547204 | .558322 | .568021 | .576287 |
| 144 | .562096 | .573816 | .584036 | .592741 | .599922 | .605569 |
| 146 | .600882 | .610140 | .617784 | .623807 | .628203 | .630974 |
| 148 | .636839 | .643348 | .648136 | .651199 | .652543 | .652175 |
| 150 | .669668 | .673134 | .674774 | .674597 | .672613 | .668841 |
| 152 | .699069 | .699185 | .697380 | .693670 | .688078 | .680632 |
| 154 | .724734 | .721180 | .715618 | .708074 | .698585 | .687188 |
| 156 | .746345 | .738782 | .729134 | .717442 | .703753 | .688118 |
| 158 | .763559 | .751624 | .737541 | .721365 | .703156 | .682980 |
| 160 | .775998 | .759295 | .740396 | .719371 | .696296 | .671254 |
| 162 | .783225 | .761311 | .737169 | .710889 | .682564 | .652293 |
| 164 | .784705 | .757067 | .727193 | .695190 | .661172 | .625259 |
| 166 | .779742 | .745768 | .709574 | .671288 | .631047 | .588993 |
| 168 | .767370 | .726290 | .683035 | .637762 | .590630 | .541807 |
| 170 | .746125 | .696917 | .645618 | .592414 | .537496 | .481059 |
| 172 | .713585 | .654784 | .594028 | .531538 | .467540 | .402264 |
| 174 | .665196 | .594489 | .522036 | .448103 | .372960 | .296880 |
| 176 | .590669 | .503791 | .415500 | .326123 | .235992 | .145438 |
| 178 | .456877 | .343243 | .228811 | .114011 | -.000725 | -.114970 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos \theta)$$

| ν | 2.20 | 2.22 | 2.24 | 2.26 | 2.28 | 2.30 |
|---|------|------|------|------|------|------|
| θ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .997856 | .997823 | .997790 | .997756 | .997723 | .997689 |
| 4 | .991438 | .991307 | .991174 | .991041 | .990906 | .990771 |
| 6 | .980783 | .980489 | .980192 | .979893 | .979593 | .979290 |
| 8 | .965953 | .965433 | .964910 | .964383 | .963852 | .963318 |
| 10 | .947034 | .946230 | .945420 | .944604 | .943783 | .942956 |
| 12 | .924137 | .922991 | .921839 | .920678 | .919510 | .918333 |
| 14 | .897394 | .895856 | .894309 | .892751 | .891183 | .889606 |
| 16 | .866961 | .864984 | .862995 | .860994 | .858980 | .856953 |
| 18 | .833016 | .830559 | .828087 | .825600 | .823099 | .820584 |
| 20 | .795755 | .792782 | .789793 | .786787 | .783765 | .780726 |
| 22 | .755395 | .751879 | .748344 | .744791 | .741220 | .737631 |
| 24 | .712171 | .708090 | .703990 | .699869 | .695730 | .691572 |
| 26 | .666334 | .661675 | .656995 | .652296 | .647576 | .642838 |
| 28 | .618150 | .612907 | .607643 | .602360 | .597058 | .591736 |
| | | | | | | |
| 30 | .567898 | .562074 | .556230 | .550367 | .544487 | .538589 |
| 32 | .515871 | .509475 | .503063 | .496634 | .490189 | .483730 |
| 34 | .462370 | .455422 | .448461 | .441487 | .434501 | .427504 |
| 36 | .407705 | .400232 | .392751 | .385262 | .377766 | .370264 |
| 38 | .352192 | .344231 | .336267 | .328301 | .320335 | .312368 |
| 40 | .296152 | .287746 | .279344 | .270949 | .262560 | .254180 |
| 42 | .239911 | .231110 | .222324 | .213553 | .204799 | .196063 |
| 44 | .183791 | .174656 | .165546 | .156462 | .147406 | .138379 |
| 46 | .128116 | .118713 | .109347 | .100020 | .090733 | .081488 |
| 48 | .073208 | .063609 | .054062 | .044567 | .035127 | .025743 |
| 50 | .019382 | .009666 | .000017 | -.009562 | -.019072 | -.028510 |
| 52 | -.033053 | -.042801 | -.052465 | -.062044 | -.071535 | -.080936 |
| 54 | -.083797 | -.093489 | -.103079 | -.112564 | -.121944 | -.131214 |
| 56 | -.132561 | -.142104 | -.151525 | -.160821 | -.169992 | -.179035 |
| 58 | -.179066 | -.188364 | -.197519 | -.206529 | -.215392 | -.224106 |
| | | | | | | |
| 60 | -.223049 | -.232003 | -.240793 | -.249417 | -.257872 | -.266156 |
| 62 | -.264260 | -.272772 | -.281097 | -.289233 | -.297178 | -.304930 |
| 64 | -.302469 | -.310438 | -.318197 | -.325745 | -.333080 | -.340199 |
| 66 | -.337461 | -.344788 | -.351883 | -.358743 | -.365367 | -.371754 |
| 68 | -.369041 | -.375629 | -.381962 | -.388038 | -.393855 | -.399413 |
| 70 | -.397038 | -.402792 | -.408268 | -.413465 | -.418382 | -.423018 |
| 72 | -.421298 | -.426127 | -.430655 | -.434884 | -.438812 | -.442440 |
| 74 | -.441693 | -.445510 | -.449006 | -.452182 | -.455039 | -.457576 |
| 76 | -.458117 | -.460840 | -.463224 | -.465271 | -.466980 | -.468354 |
| 78 | -.470488 | -.472043 | -.473243 | -.474090 | -.474583 | -.474727 |
| 80 | -.478748 | -.479070 | -.479021 | -.478605 | -.477824 | -.476682 |
| 82 | -.482865 | -.481895 | -.480542 | -.478812 | -.476707 | -.474232 |
| 84 | -.482833 | -.480521 | -.477819 | -.474732 | -.471264 | -.467422 |
| 86 | -.478669 | -.474977 | -.470891 | -.466416 | -.461558 | -.456324 |
| 88 | -.470415 | -.465317 | -.459822 | -.453940 | -.447676 | -.441041 |
| | | | | | | |
| 90 | -.458142 | -.451620 | -.444706 | -.437409 | -.429737 | -.421702 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 2.20 | 2.22 | 2.24 | 2.26 | 2.28 | 2.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.458141 | -.451620 | -.444706 | -.437409 | -.429738 | -.421702 |
| 92 | -.441940 | -.433991 | -.425659 | -.416953 | -.407885 | -.398466 |
| 94 | -.421927 | -.412561 | -.402824 | -.392729 | -.382288 | -.371515 |
| 96 | -.398243 | -.387482 | -.376368 | -.364918 | -.353144 | -.341061 |
| 98 | -.371052 | -.358931 | -.346483 | -.333724 | -.320670 | -.307337 |
| 100 | -.340537 | -.327108 | -.313381 | -.299375 | -.285109 | -.270599 |
| 102 | -.306906 | -.292231 | -.277296 | -.262120 | -.246723 | -.231126 |
| 104 | -.270383 | -.254541 | -.238482 | -.222227 | -.205797 | -.189214 |
| 106 | -.231212 | -.214296 | -.197212 | -.179982 | -.162630 | -.145179 |
| 108 | -.189655 | -.171771 | -.153774 | -.135689 | -.117540 | -.099352 |
| 110 | -.145988 | -.127257 | -.108475 | -.089666 | -.070859 | -.052079 |
| 112 | -.100503 | -.081059 | -.061630 | -.042245 | -.022931 | -.003716 |
| 114 | -.053504 | -.033494 | -.013572 | .006230 | .025886 | .045367 |
| 116 | -.005306 | .015110 | .035359 | .055410 | .075233 | .094797 |
| 118 | .043765 | .064417 | .084817 | .104933 | .124735 | .144193 |
| 120 | .093377 | .114082 | .134445 | .154434 | .174019 | .193169 |
| 122 | .143191 | .163755 | .183883 | .203543 | .222705 | .241339 |
| 124 | .192863 | .213082 | .232768 | .251890 | .270415 | .288316 |
| 126 | .242045 | .261708 | .280737 | .299101 | .316770 | .333717 |
| 128 | .290390 | .309276 | .327425 | .344807 | .361394 | .377159 |
| 130 | .337547 | .355430 | .372471 | .388641 | .403915 | .418269 |
| 132 | .383169 | .399816 | .415515 | .430240 | .443968 | .456677 |
| 134 | .426911 | .442083 | .456202 | .469245 | .481191 | .492024 |
| 136 | .468430 | .481886 | .494183 | .505305 | .515234 | .523957 |
| 138 | .507388 | .518881 | .529115 | .538076 | .545752 | .552134 |
| 140 | .543450 | .552733 | .560659 | .567219 | .572407 | .576220 |
| 142 | .576287 | .583109 | .588482 | .592403 | .594871 | .595890 |
| 144 | .605569 | .609681 | .612257 | .613300 | .612820 | .610825 |
| 146 | .630974 | .632123 | .631657 | .629588 | .625933 | .620710 |
| 148 | .652175 | .650107 | .646356 | .640942 | .633890 | .625229 |
| 150 | .668841 | .663301 | .656021 | .647031 | .636365 | .624061 |
| 152 | .680632 | .671363 | .660309 | .647511 | .633015 | .616871 |
| 154 | .687188 | .673927 | .658852 | .642015 | .623475 | .603295 |
| 156 | .688118 | .670594 | .651244 | .630134 | .607335 | .582923 |
| 158 | .682980 | .660910 | .637021 | .611394 | .584116 | .555277 |
| 160 | .671254 | .644332 | .615622 | .585222 | .553233 | .519761 |
| 162 | .652293 | .620183 | .586343 | .550888 | .513936 | .475611 |
| 164 | .625259 | .587575 | .548250 | .507418 | .465216 | .421786 |
| 166 | .588993 | .545273 | .500038 | .453442 | .405644 | .356806 |
| 168 | .541807 | .491464 | .439777 | .386925 | .333089 | .278453 |
| 170 | .481059 | .423304 | .364433 | .304653 | .244170 | .183195 |
| 172 | .402264 | .335945 | .268816 | .201118 | .133086 | .064960 |
| 174 | .296880 | .220140 | .143015 | .065781 | -.011286 | -.087913 |
| 176 | .145438 | .054792 | -.035612 | -.125450 | -.214395 | -.302127 |
| 178 | -.114970 | -.228299 | -.340292 | -.450534 | -.558621 | -.664156 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ $\theta$ | 2.30 | 2.32 | 2.34 | 2.36 | 2.38 | 2.40 |
|---|---|---|---|---|---|---|
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .997689 | .997655 | .997620 | .997585 | .997551 | .997515 |
| 4 | .990771 | .990634 | .990497 | .990359 | .990220 | .990080 |
| 6 | .979290 | .978985 | .978677 | .978368 | .978057 | .977743 |
| 8 | .963318 | .962780 | .962238 | .961692 | .961143 | .960590 |
| 10 | .942956 | .942124 | .941286 | .940442 | .939593 | .938739 |
| 12 | .918333 | .917150 | .915958 | .914759 | .913552 | .912338 |
| 14 | .889606 | .888018 | .886420 | .884813 | .883195 | .881568 |
| 16 | .856953 | .854915 | .852864 | .850801 | .848727 | .846640 |
| 18 | .820584 | .818054 | .815510 | .812951 | .810378 | .807791 |
| 20 | .780726 | .777670 | .774599 | .771511 | .768408 | .765288 |
| 22 | .737631 | .734024 | .730399 | .726757 | .723097 | .719420 |
| 24 | .691572 | .687394 | .683198 | .678984 | .674751 | .670500 |
| 26 | .642838 | .638080 | .633303 | .628508 | .623694 | .618862 |
| 28 | .591736 | .586396 | .581038 | .575661 | .570267 | .564856 |
| 30 | .538589 | .532674 | .526742 | .520794 | .514830 | .508851 |
| 32 | .483730 | .477256 | .470768 | .464266 | .457752 | .451226 |
| 34 | .427504 | .420496 | .413478 | .406451 | .399415 | .392372 |
| 36 | .370264 | .362756 | .355244 | .347728 | .340209 | .332688 |
| 38 | .312368 | .304404 | .296441 | .288482 | .280527 | .272577 |
| 40 | .254180 | .245810 | .237450 | .229102 | .220767 | .212446 |
| 42 | .196063 | .187346 | .178650 | .169976 | .161324 | .152698 |
| 44 | .138379 | .129383 | .120419 | .111489 | .102594 | .093735 |
| 46 | .081488 | .072287 | .063131 | .054022 | .044962 | .035951 |
| 48 | .025743 | .016418 | .007152 | -.002050 | -.011191 | -.020266 |
| 50 | -.028510 | -.037873 | -.047160 | -.056369 | -.065498 | -.074546 |
| 52 | -.080936 | -.090246 | -.099462 | -.108582 | -.117605 | -.126528 |
| 54 | -.131214 | -.140374 | -.149422 | -.158355 | -.167172 | -.175870 |
| 56 | -.179035 | -.187947 | -.196726 | -.205371 | -.213880 | -.222251 |
| 58 | -.224106 | -.232669 | -.241079 | -.249333 | -.257430 | -.265369 |
| 60 | -.266156 | -.274267 | -.282204 | -.289964 | -.297546 | -.304947 |
| 62 | -.304930 | -.312488 | -.319849 | -.327012 | -.333975 | -.340736 |
| 64 | -.340199 | -.347101 | -.353785 | -.360249 | -.366492 | -.372512 |
| 66 | -.371754 | -.377902 | -.383810 | -.389476 | -.394900 | -.400081 |
| 68 | -.399413 | -.404710 | -.409746 | -.414521 | -.419032 | -.423279 |
| 70 | -.423018 | -.427374 | -.431447 | -.435239 | -.438749 | -.441977 |
| 72 | -.442440 | -.445767 | -.448794 | -.451520 | -.453946 | -.456074 |
| 74 | -.457576 | -.459795 | -.461697 | -.463281 | -.464551 | -.465505 |
| 76 | -.468354 | -.469393 | -.470099 | -.470475 | -.470521 | -.470241 |
| 78 | -.474727 | -.474523 | -.473974 | -.473082 | -.471851 | -.470283 |
| 80 | -.476682 | -.475181 | -.473326 | -.471119 | -.468565 | -.465668 |
| 82 | -.474232 | -.471392 | -.468190 | -.464633 | -.460724 | -.456470 |
| 84 | -.467422 | -.463210 | -.458635 | -.453703 | -.448419 | -.442791 |
| 86 | -.456324 | -.450722 | -.444758 | -.438440 | -.431775 | -.424771 |
| 88 | -.441041 | -.434041 | -.426687 | -.418985 | -.410947 | -.402580 |
| 90 | -.421702 | -.413313 | -.404579 | -.395511 | -.386121 | -.376417 |

| $\nu$ | 2.30 | 2.32 | 2.34 | 2.36 | 2.38 | 2.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.421702 | -.413313 | -.404579 | -.395511 | -.386120 | -.376417 |
| 92 | -.398466 | -.388707 | -.378620 | -.368218 | -.357512 | -.346515 |
| 94 | -.371515 | -.360423 | -.349025 | -.337334 | -.325364 | -.313130 |
| 96 | -.341061 | -.328685 | -.316031 | -.303113 | -.289947 | -.276549 |
| 98 | -.307337 | -.293742 | -.279902 | -.265834 | -.251554 | -.237080 |
| 100 | -.270599 | -.255865 | -.240925 | -.225798 | -.210502 | -.195056 |
| 102 | -.231126 | -.215347 | -.199408 | -.183328 | -.167128 | -.150828 |
| 104 | -.189214 | -.172499 | -.155676 | -.138764 | -.121787 | -.104766 |
| 106 | -.145179 | -.127652 | -.110073 | -.092466 | -.074852 | -.057256 |
| 108 | -.099352 | -.081150 | -.062959 | -.044803 | -.026708 | -.008695 |
| 110 | -.052079 | -.033352 | -.014705 | .003836 | .022248 | .040504 |
| 112 | -.003716 | .015371 | .034307 | .053062 | .071612 | .089930 |
| 114 | .045367 | .064643 | .083687 | .102472 | .120971 | .139157 |
| 116 | .094797 | .114075 | .133038 | .151658 | .169908 | .187763 |
| 118 | .144193 | .163277 | .181959 | .200212 | .218008 | .235321 |
| | | | | | | |
| 120 | .193169 | .211856 | .230050 | .247724 | .264853 | .281411 |
| 122 | .241339 | .259416 | .276907 | .293788 | .310031 | .325614 |
| 124 | .288316 | .305565 | .322135 | .337999 | .353136 | .367522 |
| 126 | .333717 | .349914 | .365337 | .379962 | .393767 | .406732 |
| 128 | .377159 | .392078 | .406128 | .419286 | .431535 | .442857 |
| 130 | .418269 | .431680 | .444127 | .455594 | .466062 | .475519 |
| 132 | .456677 | .468350 | .478967 | .488516 | .496982 | .504357 |
| 134 | .492024 | .501728 | .510289 | .517697 | .523944 | .529024 |
| 136 | .523957 | .531463 | .537744 | .542793 | .546609 | .549190 |
| 138 | .552134 | .557217 | .560998 | .563476 | .564655 | .564541 |
| 140 | .576220 | .578658 | .579726 | .579428 | .577774 | .574777 |
| 142 | .595890 | .595468 | .593614 | .590342 | .585670 | .579616 |
| 144 | .610825 | .607332 | .602358 | .595924 | .588057 | .578783 |
| 146 | .620710 | .613942 | .605657 | .595884 | .584658 | .572016 |
| 148 | .625229 | .614991 | .603213 | .589934 | .575198 | .559053 |
| | | | | | | |
| 150 | .624061 | .610165 | .594720 | .577779 | .559396 | .539627 |
| 152 | .616871 | .599133 | .579859 | .559111 | .536955 | .513459 |
| 154 | .603295 | .581539 | .558280 | .533590 | .507549 | .480235 |
| 156 | .582923 | .556978 | .529584 | .500827 | .470798 | .439591 |
| 158 | .555277 | .524970 | .493294 | .460350 | .426242 | .391077 |
| 160 | .519761 | .484917 | .448811 | .411562 | .373289 | .334111 |
| 162 | .475611 | .436039 | .395349 | .353673 | .311147 | .267905 |
| 164 | .421786 | .377272 | .331822 | .285584 | .238709 | .191349 |
| 166 | .356806 | .307092 | .256668 | .205701 | .154360 | .102812 |
| 168 | .278453 | .223202 | .167525 | .111606 | .055634 | -.000204 |
| 170 | .183195 | .121938 | .060606 | -.000589 | -.061442 | -.121748 |
| 172 | .064960 | -.003022 | -.070627 | -.137620 | -.203772 | -.268855 |
| 174 | -.087913 | -.163830 | -.238770 | -.312469 | -.384673 | -.455130 |
| 176 | -.302127 | -.388332 | -.472701 | -.554937 | -.634747 | -.711851 |
| 178 | -.664156 | -.766756 | -.866046 | -.961670 | -1.053282 | -1.140554 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_{\nu}(\cos \theta)$$

| $\nu$ | 2.40 | 2.42 | 2.44 | 2.46 | 2.48 | 2.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .997515 | .997480 | .997444 | .997408 | .997372 | .997336 |
| 4 | .990080 | .989938 | .989796 | .989653 | .989509 | .989364 |
| 6 | .977743 | .977427 | .977110 | .976790 | .976468 | .976144 |
| 8 | .960590 | .960034 | .959474 | .958910 | .958343 | .957772 |
| 10 | .938739 | .937879 | .937013 | .936142 | .935266 | .934384 |
| 12 | .912338 | .911116 | .909886 | .908649 | .907404 | .906152 |
| 14 | .881568 | .879931 | .878284 | .876628 | .874962 | .873286 |
| 16 | .846640 | .844541 | .842430 | .840307 | .838172 | .836026 |
| 18 | .807791 | .805190 | .802576 | .799947 | .797304 | .794648 |
| 20 | .765288 | .762153 | .759002 | .755835 | .752653 | .749456 |
| 22 | .719420 | .715726 | .712015 | .708287 | .704543 | .700782 |
| 24 | .670500 | .666232 | .661946 | .657642 | .653322 | .648984 |
| 26 | .618862 | .614012 | .609145 | .604261 | .599360 | .594443 |
| 28 | .564856 | .559428 | .553984 | .548524 | .543048 | .537557 |
| 30 | .508851 | .502857 | .496849 | .490827 | .484791 | .478743 |
| 32 | .451226 | .444688 | .438139 | .431579 | .425010 | .418432 |
| 34 | .392372 | .385321 | .378265 | .371202 | .364134 | .357063 |
| 36 | .332688 | .325166 | .317644 | .310122 | .302601 | .295083 |
| 38 | .272577 | .264634 | .256698 | .248770 | .240851 | .232942 |
| 40 | .212446 | .204140 | .195850 | .187578 | .179324 | .171091 |
| 42 | .152698 | .144097 | .135523 | .126977 | .118461 | .109975 |
| 44 | .093735 | .084914 | .076132 | .067391 | .058691 | .050036 |
| 46 | .035951 | .026992 | .018086 | .009235 | .000440 | -.008297 |
| 48 | -.020266 | -.029275 | -.038215 | -.047085 | -.055884 | -.064609 |
| 50 | -.074546 | -.083510 | -.092390 | -.101182 | -.109886 | -.118500 |
| 52 | -.126528 | -.135350 | -.144069 | -.152683 | -.161191 | -.169590 |
| 54 | -.175870 | -.184448 | -.192905 | -.201237 | -.209443 | -.217523 |
| 56 | -.222251 | -.230481 | -.238570 | -.246514 | -.254314 | -.261966 |
| 58 | -.265369 | -.273146 | -.280761 | -.288212 | -.295498 | -.302615 |
| 60 | -.304947 | -.312167 | -.319204 | -.326055 | -.332721 | -.339198 |
| 62 | -.340736 | -.347295 | -.353649 | -.359797 | -.365739 | -.371472 |
| 64 | -.372512 | -.378308 | -.383879 | -.389224 | -.394342 | -.399232 |
| 66 | -.400081 | -.405017 | -.409708 | -.414153 | -.418352 | -.422305 |
| 68 | -.423279 | -.427263 | -.430983 | -.434439 | -.437630 | -.440557 |
| 70 | -.441977 | -.444922 | -.447586 | -.449969 | -.452070 | -.453892 |
| 72 | -.456074 | -.457902 | -.459434 | -.460668 | -.461608 | -.462254 |
| 74 | -.465505 | -.466147 | -.466478 | -.466500 | -.466214 | -.465624 |
| 76 | -.470241 | -.469636 | -.468709 | -.467462 | -.465900 | -.464024 |
| 78 | -.470283 | -.468381 | -.466150 | -.463593 | -.460713 | -.457515 |
| 80 | -.465668 | -.462433 | -.458863 | -.454964 | -.450741 | -.446198 |
| 82 | -.456470 | -.451875 | -.446946 | -.441688 | -.436108 | -.430212 |
| 84 | -.442791 | -.436826 | -.430530 | -.423910 | -.416975 | -.409731 |
| 86 | -.424771 | -.417438 | -.409782 | -.401812 | -.393538 | -.384967 |
| 88 | -.402580 | -.393895 | -.384901 | -.375608 | -.366027 | -.356168 |
| 90 | -.376417 | -.366413 | -.356119 | -.345546 | -.334706 | -.323611 |

$$P_\nu(\cos \theta)$$

| $\nu$ | 2.40 | 2.42 | 2.44 | 2.46 | 2.48 | 2.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | −.376417 | −.366413 | −.356119 | −.345546 | −.334706 | −.323611 |
| 92 | −.346515 | −.335239 | −.323697 | −.311902 | −.299867 | −.287606 |
| 94 | −.313130 | −.300646 | −.287925 | −.274983 | −.261833 | −.248492 |
| 96 | −.276549 | −.262935 | −.249119 | −.235120 | −.220951 | −.206631 |
| 98 | −.237080 | −.222430 | −.207620 | −.192669 | −.177593 | −.162410 |
| 100 | −.195056 | −.179479 | −.163790 | −.148007 | −.132150 | −.116237 |
| 102 | −.150828 | −.134448 | −.118009 | −.101531 | −.085034 | −.068537 |
| 104 | −.104766 | −.087722 | −.070677 | −.053652 | −.036669 | −.019749 |
| 106 | −.057256 | −.039699 | −.022205 | −.004797 | .012504 | .029676 |
| 108 | −.008695 | .009208 | .026981 | .044600 | .062041 | .079283 |
| 110 | .040504 | .058581 | .076452 | .094096 | .111488 | .128605 |
| 112 | .089930 | .107991 | .125770 | .143244 | .160388 | .177179 |
| 114 | .139157 | .157007 | .174494 | .191594 | .208285 | .224542 |
| 116 | .187763 | .205196 | .222184 | .238701 | .254726 | .270237 |
| 118 | .235321 | .252127 | .268402 | .284122 | .299266 | .313812 |
| | | | | | | |
| 120 | .281411 | .297374 | .312718 | .327422 | .341466 | .354829 |
| 122 | .325614 | .340513 | .354707 | .368176 | .380900 | .392862 |
| 124 | .367522 | .381135 | .393957 | .405970 | .417157 | .427502 |
| 126 | .406732 | .418838 | .430068 | .440407 | .449841 | .458359 |
| 128 | .442857 | .453234 | .462655 | .471106 | .478578 | .485062 |
| 130 | .475519 | .483951 | .491349 | .497704 | .503010 | .507264 |
| 132 | .504357 | .510631 | .515799 | .519857 | .522804 | .524641 |
| 134 | .529024 | .532934 | .535673 | .537243 | .537648 | .536893 |
| 136 | .549190 | .550539 | .550660 | .549562 | .547253 | .543747 |
| 138 | .564541 | .563141 | .560467 | .556533 | .551355 | .544953 |
| 140 | .574777 | .570453 | .564819 | .557896 | .549710 | .540285 |
| 142 | .579616 | .572204 | .563459 | .553412 | .542094 | .529539 |
| 144 | .578783 | .568135 | .556146 | .542855 | .528302 | .512530 |
| 146 | .572016 | .557998 | .542648 | .526012 | .508141 | .489086 |
| 148 | .559053 | .541548 | .522736 | .502676 | .481425 | .459045 |
| | | | | | | |
| 150 | .539627 | .518535 | .496182 | .472636 | .447966 | .422244 |
| 152 | .513459 | .488695 | .462739 | .435668 | .407563 | .378506 |
| 154 | .480235 | .451734 | .422132 | .391519 | .359985 | .327625 |
| 156 | .439591 | .407302 | .374031 | .339878 | .304946 | .269340 |
| 158 | .391077 | .354965 | .318018 | .280348 | .242072 | .203305 |
| 160 | .334111 | .294153 | .253539 | .212396 | .170851 | .129031 |
| 162 | .267905 | .224086 | .179828 | .135271 | .090554 | .045816 |
| 164 | .191349 | .143657 | .095785 | .047886 | .000113 | −.047385 |
| 166 | .102812 | .051227 | −.000228 | −.051388 | −.102087 | −.152165 |
| 168 | −.000204 | −.055727 | −.110749 | −.165092 | −.218577 | −.271033 |
| 170 | −.121748 | −.181304 | −.239912 | −.297377 | −.353510 | −.408127 |
| 172 | −.268855 | −.332650 | −.394941 | −.455518 | −.514179 | −.570729 |
| 174 | −.455130 | −.523598 | −.589843 | −.653638 | −.714768 | −.773028 |
| 176 | −.711851 | −.785980 | −.856877 | −.924297 | −.988007 | −1.047793 |
| 178 | −1.140554 | −1.223178 | −1.300862 | −1.373332 | −1.440337 | −1.501648 |
| | | | | | | |
| 180 | −∞ | −∞ | −∞ | −∞ | −∞ | −∞ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 2.50 | 2.52 | 2.54 | 2.56 | 2.58 | 2.60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .997336 | .997299 | .997263 | .997225 | .997188 | .997150 |
| 4 | .989364 | .989218 | .989072 | .988923 | .988775 | .988625 |
| 6 | .976144 | .975817 | .975489 | .975159 | .974826 | .974491 |
| 8 | .957772 | .957197 | .956618 | .956036 | .955451 | .954861 |
| 10 | .934384 | .933496 | .932603 | .931705 | .930801 | .929891 |
| 12 | .906152 | .904893 | .903625 | .902350 | .901068 | .899778 |
| 14 | .873286 | .871600 | .869905 | .868200 | .866486 | .864762 |
| 16 | .836026 | .833868 | .831698 | .829517 | .827324 | .825119 |
| 18 | .794648 | .791978 | .789295 | .786598 | .783887 | .781164 |
| 20 | .749456 | .746244 | .743016 | .739773 | .736516 | .733244 |
| 22 | .700782 | .697005 | .693212 | .689403 | .685578 | .681737 |
| 24 | .648985 | .644630 | .640260 | .635873 | .631470 | .627051 |
| 26 | .594443 | .589509 | .584559 | .579593 | .574613 | .569616 |
| 28 | .537557 | .532050 | .526530 | .520996 | .515447 | .509885 |
| 30 | .478743 | .472683 | .466610 | .460526 | .454432 | .448326 |
| 32 | .418432 | .411845 | .405250 | .398647 | .392038 | .385422 |
| 34 | .357063 | .349988 | .342910 | .335830 | .328748 | .321665 |
| 36 | .295083 | .287568 | .280056 | .272549 | .265048 | .257553 |
| 38 | .232942 | .225044 | .217159 | .209287 | .201428 | .193584 |
| 40 | .171091 | .162877 | .154686 | .146518 | .138374 | .130254 |
| 42 | .109975 | .101522 | .093102 | .084716 | .076366 | .068052 |
| 44 | .050036 | .041425 | .032860 | .024343 | .015875 | .007456 |
| 46 | -.008297 | -.016975 | -.025593 | -.034149 | -.042642 | -.051069 |
| 48 | -.064609 | -.073259 | -.081834 | -.090330 | -.098747 | -.107083 |
| 50 | -.118500 | -.127022 | -.135451 | -.143785 | -.152022 | -.160161 |
| 52 | -.169590 | -.177880 | -.186058 | -.194123 | -.202073 | -.209906 |
| 54 | -.217523 | -.225473 | -.233293 | -.240981 | -.248534 | -.255953 |
| 56 | -.261966 | -.269469 | -.276822 | -.284024 | -.291072 | -.297966 |
| 58 | -.302615 | -.309564 | -.316343 | -.322950 | -.329384 | -.335644 |
| 60 | -.339198 | -.345486 | -.351584 | -.357491 | -.363204 | -.368724 |
| 62 | -.371472 | -.376997 | -.382311 | -.387414 | -.392306 | -.396985 |
| 64 | -.399232 | -.403893 | -.408326 | -.412528 | -.416501 | -.420242 |
| 66 | -.422304 | -.426010 | -.429468 | -.432679 | -.435642 | -.438358 |
| 68 | -.440556 | -.443219 | -.445618 | -.447754 | -.449627 | -.451238 |
| 70 | -.453892 | -.455434 | -.456698 | -.457684 | -.458395 | -.458830 |
| 72 | -.462253 | -.462607 | -.462669 | -.462442 | -.461929 | -.461130 |
| 74 | -.465623 | -.464730 | -.463536 | -.462044 | -.460258 | -.458179 |
| 76 | -.464024 | -.461837 | -.459344 | -.456548 | -.453453 | -.450062 |
| 78 | -.457515 | -.454003 | -.450182 | -.446056 | -.441629 | -.436908 |
| 80 | -.446198 | -.441342 | -.436177 | -.430709 | -.424945 | -.418890 |
| 82 | -.430211 | -.424006 | -.417497 | -.410693 | -.403599 | -.396224 |
| 84 | -.409731 | -.402186 | -.394349 | -.386227 | -.377830 | -.369165 |
| 86 | -.384967 | -.376110 | -.366976 | -.357574 | -.347914 | -.338005 |
| 88 | -.356168 | -.346041 | -.335657 | -.325027 | -.314162 | -.303074 |
| 90 | -.323611 | -.312273 | -.300704 | -.288916 | -.276921 | -.264733 |

$$P_\nu(\cos \theta)$$

| ν | 2.50 | 2.52 | 2.54 | 2.56 | 2.58 | 2.60 |
|---|---|---|---|---|---|---|
| θ | | | | | | |
| 90 | -.323611 | -.312273 | -.300704 | -.288916 | -.276921 | -.264733 |
| 92 | -.287606 | -.275132 | -.262458 | -.249598 | -.236566 | -.223375 |
| 94 | -.248492 | -.234973 | -.221291 | -.207461 | -.193499 | -.179420 |
| 96 | -.206631 | -.192174 | -.177597 | -.162917 | -.148149 | -.133310 |
| 98 | -.162410 | -.147138 | -.131795 | -.116397 | -.100963 | -.085509 |
| 100 | -.116238 | -.100288 | -.084321 | -.068354 | -.052406 | -.036495 |
| 102 | -.068537 | -.052062 | -.035627 | -.019253 | -.002958 | .013237 |
| 104 | -.019749 | -.002912 | .013819 | .030427 | .046891 | .063189 |
| 106 | .029676 | .046698 | .063547 | .080204 | .096647 | .112855 |
| 108 | .079282 | .096301 | .113077 | .129587 | .145811 | .161729 |
| 110 | .128605 | .145425 | .161926 | .178087 | .193887 | .209306 |
| 112 | .177179 | .193596 | .209616 | .225218 | .240383 | .255091 |
| 114 | .224542 | .240345 | .255672 | .270503 | .284818 | .298598 |
| 116 | .270236 | .285211 | .299629 | .313471 | .326720 | .339358 |
| 118 | .313812 | .327740 | .341032 | .353669 | .365637 | .376917 |
| | | | | | | |
| 120 | .354829 | .367493 | .379442 | .390660 | .401132 | .410845 |
| 122 | .392862 | .404046 | .414438 | .424024 | .432792 | .440733 |
| 124 | .427502 | .436993 | .445618 | .453367 | .460230 | .466202 |
| 126 | .458359 | .465949 | .472605 | .478318 | .483085 | .486902 |
| 128 | .485062 | .490552 | .495043 | .498534 | .501024 | .502513 |
| 130 | .507264 | .510463 | .512608 | .513701 | .513746 | .512749 |
| 132 | .524641 | .525370 | .524999 | .523533 | .520982 | .517359 |
| 134 | .536893 | .534989 | .531945 | .527776 | .522497 | .516126 |
| 136 | .543747 | .539059 | .533206 | .526208 | .518086 | .508867 |
| 138 | .544953 | .537349 | .528567 | .518634 | .507579 | .495434 |
| 140 | .540285 | .529652 | .517842 | .504891 | .490834 | .475711 |
| 142 | .529539 | .515785 | .500871 | .484841 | .467739 | .449612 |
| 144 | .512529 | .495584 | .477514 | .458371 | .438207 | .417078 |
| 146 | .489086 | .468903 | .447649 | .425383 | .402169 | .378070 |
| 148 | .459045 | .435602 | .411163 | .385796 | .359572 | .332564 |
| | | | | | | |
| 150 | .422244 | .395546 | .367946 | .339525 | .310363 | .280540 |
| 152 | .378506 | .348582 | .317878 | .286482 | .254483 | .221972 |
| 154 | .327624 | .294533 | .260807 | .226545 | .191845 | .156808 |
| 156 | .269340 | .233167 | .196533 | .159546 | .122315 | .084947 |
| 158 | .203305 | .164163 | .124766 | .085229 | .045670 | .006206 |
| 160 | .129031 | .087064 | .045079 | .003200 | -.038444 | -.079730 |
| 162 | .045816 | .001195 | -.043169 | -.087143 | -.130593 | -.173386 |
| 164 | -.047385 | -.094458 | -.140960 | -.186746 | -.231675 | -.275609 |
| 166 | -.152165 | -.201461 | -.249819 | -.297088 | -.343120 | -.387772 |
| 168 | -.271033 | -.322290 | -.372183 | -.420554 | -.467251 | -.512125 |
| 170 | -.408127 | -.461049 | -.512104 | -.561129 | -.607967 | -.652469 |
| 172 | -.570729 | -.624981 | -.676757 | -.725890 | -.772220 | -.815600 |
| 174 | -.773028 | -.828223 | -.880170 | -.928698 | -.973652 | -1.014885 |
| 176 | -1.047793 | -1.103452 | -1.154799 | -1.201664 | -1.243896 | -1.281359 |
| 178 | -1.501648 | -1.557054 | -1.606372 | -1.649437 | -1.686113 | -1.716285 |
| | | | | | | |
| 180 | -∞ | -∞ | -∞ | -∞ | -∞ | -∞ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 2.60 | 2.62 | 2.64 | 2.66 | 2.68 | 2.70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .997150 | .997113 | .997075 | .997036 | .996997 | .996959 |
| 4 | .988625 | .988474 | .988323 | .988170 | .988016 | .987862 |
| 6 | .974491 | .974154 | .973815 | .973474 | .973131 | .972786 |
| 8 | .954861 | .954268 | .953672 | .953071 | .952467 | .951860 |
| 10 | .929891 | .928976 | .928056 | .927130 | .926199 | .925262 |
| 12 | .899778 | .898481 | .897176 | .895864 | .894545 | .893218 |
| 14 | .864762 | .863028 | .861285 | .859533 | .857771 | .856000 |
| 16 | .825119 | .822903 | .820675 | .818436 | .816186 | .813924 |
| 18 | .781164 | .778427 | .775676 | .772913 | .770137 | .767348 |
| 20 | .733244 | .729956 | .726655 | .723339 | .720009 | .716665 |
| 22 | .681737 | .677881 | .674010 | .670123 | .666222 | .662306 |
| 24 | .627051 | .622617 | .618167 | .613703 | .609223 | .604729 |
| 26 | .569616 | .564606 | .559580 | .554541 | .549487 | .544420 |
| 28 | .509885 | .504310 | .498723 | .493123 | .487511 | .481888 |
| | | | | | | |
| 30 | .448326 | .442211 | .436086 | .429952 | .423809 | .417659 |
| 32 | .385422 | .378800 | .372174 | .365543 | .358908 | .352269 |
| 34 | .321665 | .314583 | .307501 | .300421 | .293343 | .286267 |
| 36 | .257553 | .250065 | .242586 | .235115 | .227653 | .220203 |
| 38 | .193584 | .185757 | .177946 | .170153 | .162378 | .154624 |
| 40 | .130254 | .122161 | .114096 | .106058 | .098050 | .090073 |
| 42 | .068052 | .059777 | .051541 | .043346 | .035192 | .027081 |
| 44 | .007456 | -.000910 | -.009224 | -.017484 | -.025689 | -.033837 |
| 46 | -.051069 | -.059431 | -.067725 | -.075950 | -.084104 | -.092187 |
| 48 | -.107083 | -.115337 | -.123506 | -.131591 | -.139589 | -.147499 |
| 50 | -.160161 | -.168200 | -.176138 | -.183974 | -.191706 | -.199332 |
| 52 | -.209906 | -.217622 | -.225219 | -.232695 | -.240049 | -.247279 |
| 54 | -.255953 | -.263235 | -.270379 | -.277383 | -.284247 | -.290968 |
| 56 | -.297966 | -.304703 | -.311283 | -.317705 | -.323967 | -.330068 |
| 58 | -.335644 | -.341728 | -.347636 | -.353366 | -.358917 | -.364289 |
| | | | | | | |
| 60 | -.368724 | -.374050 | -.379180 | -.384114 | -.388850 | -.393389 |
| 62 | -.396985 | -.401450 | -.405702 | -.409740 | -.413563 | -.417170 |
| 64 | -.420242 | -.423753 | -.427033 | -.430082 | -.432900 | -.435487 |
| 66 | -.438358 | -.440828 | -.443050 | -.445027 | -.446757 | -.448243 |
| 68 | -.451238 | -.452587 | -.453676 | -.454506 | -.455077 | -.455392 |
| 70 | -.458830 | -.458992 | -.458882 | -.458502 | -.457855 | -.456940 |
| 72 | -.461130 | -.460049 | -.458687 | -.457048 | -.455134 | -.452947 |
| 74 | -.458179 | -.455812 | -.453159 | -.450223 | -.447009 | -.443520 |
| 76 | -.450062 | -.446379 | -.442409 | -.438156 | -.433625 | -.428820 |
| 78 | -.436908 | -.431896 | -.426599 | -.421023 | -.415173 | -.409055 |
| 80 | -.418890 | -.412551 | -.405933 | -.399044 | -.391890 | -.384478 |
| 82 | -.396224 | -.388575 | -.380659 | -.372485 | -.364059 | -.355391 |
| 84 | -.369165 | -.360240 | -.351066 | -.341651 | -.332004 | -.322134 |
| 86 | -.338005 | -.327858 | -.317482 | -.306888 | -.296087 | -.285088 |
| 88 | -.303074 | -.291772 | -.280269 | -.268577 | -.256706 | -.244669 |
| | | | | | | |
| 90 | -.264733 | -.252363 | -.239825 | -.227130 | -.214293 | -.201325 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 2.60 | 2.62 | 2.64 | 2.66 | 2.68 | 2.70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.264733 | -.252363 | -.239825 | -.227130 | -.214293 | -.201325 |
| 92 | -.223375 | -.210040 | -.196574 | -.182992 | -.169307 | -.155533 |
| 94 | -.179420 | -.165238 | -.150970 | -.136629 | -.122231 | -.107792 |
| 96 | -.133310 | -.118417 | -.103485 | -.088531 | -.073572 | -.058622 |
| 98 | -.085509 | -.070053 | -.054613 | -.039206 | -.023848 | -.008556 |
| 100 | -.036495 | -.020641 | -.004860 | .010828 | .026407 | .041859 |
| 102 | .013237 | .029315 | .045256 | .061042 | .076655 | .092076 |
| 104 | .063189 | .079304 | .095215 | .110904 | .126353 | .141543 |
| 106 | .112855 | .128811 | .144492 | .159882 | .174962 | .189713 |
| 108 | .161729 | .177320 | .192566 | .207449 | .221948 | .236049 |
| 110 | .209306 | .224324 | .238923 | .253084 | .266791 | .280026 |
| 112 | .255091 | .269322 | .283059 | .296285 | .308983 | .321138 |
| 114 | .298598 | .311827 | .324487 | .336562 | .348038 | .358900 |
| 116 | .339358 | .351369 | .362738 | .373450 | .383493 | .392855 |
| 118 | .376917 | .387498 | .397365 | .406507 | .414913 | .422573 |
| | | | | | | |
| 120 | .410845 | .419787 | .427948 | .435319 | .441892 | .447661 |
| 122 | .440733 | .447837 | .454096 | .459506 | .464061 | .467759 |
| 124 | .466202 | .471276 | .475449 | .478719 | .481085 | .482549 |
| 126 | .486902 | .489767 | .491682 | .492648 | .492669 | .491751 |
| 128 | .502513 | .503005 | .502505 | .501020 | .498559 | .495132 |
| 130 | .512749 | .510719 | .507666 | .503603 | .498542 | .492501 |
| 132 | .517359 | .512678 | .506953 | .500203 | .492449 | .483712 |
| 134 | .516126 | .508683 | .500190 | .490671 | .480153 | .468664 |
| 136 | .508867 | .498576 | .487242 | .474896 | .461571 | .447301 |
| 138 | .495434 | .482233 | .468011 | .452806 | .436659 | .419611 |
| 140 | .475711 | .459563 | .442434 | .424368 | .405414 | .385620 |
| 142 | .449612 | .430510 | .410482 | .389584 | .367869 | .345394 |
| 144 | .417078 | .395042 | .372157 | .348485 | .324088 | .299030 |
| 146 | .378070 | .353151 | .327481 | .301128 | .274162 | .246655 |
| 148 | .332564 | .304847 | .276495 | .247588 | .218202 | .188415 |
| | | | | | | |
| 150 | .280540 | .250141 | .219248 | .187948 | .156326 | .124467 |
| 152 | .221972 | .189042 | .155783 | .122290 | .088654 | .054968 |
| 154 | .156808 | .121533 | .086120 | .050670 | .015281 | -.019945 |
| 156 | .084947 | .047551 | .010235 | -.026895 | -.063733 | -.100175 |
| 158 | .006206 | -.033047 | -.071975 | -.110466 | -.148408 | -.185692 |
| 160 | -.079730 | -.120537 | -.160741 | -.200227 | -.238877 | -.276580 |
| 162 | -.173386 | -.215393 | -.256490 | -.296552 | -.335463 | -.373107 |
| 164 | -.275609 | -.318413 | -.359959 | -.400120 | -.438778 | -.475816 |
| 166 | -.387772 | -.430906 | -.472389 | -.512096 | -.549907 | -.585708 |
| 168 | -.512125 | -.555038 | -.595856 | -.634455 | -.670716 | -.704532 |
| 170 | -.652469 | -.694495 | -.733915 | -.770606 | -.804457 | -.835367 |
| 172 | -.815600 | -.855892 | -.892971 | -.926722 | -.957045 | -.983849 |
| 174 | -1.014885 | -1.052268 | -1.085686 | -1.115037 | -1.140234 | -1.161206 |
| 176 | -1.281359 | -1.313937 | -1.341531 | -1.364062 | -1.381467 | -1.393705 |
| 178 | -1.716285 | -1.739864 | -1.756786 | -1.767011 | -1.770526 | -1.767342 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos\theta)$$

| $\nu$ | 2.70 | 2.72 | 2.74 | 2.76 | 2.78 | 2.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .996959 | .996920 | .996880 | .996841 | .996801 | .996761 |
| 4 | .987862 | .987706 | .987550 | .987392 | .987234 | .987075 |
| 6 | .972786 | .972439 | .972089 | .971737 | .971384 | .971028 |
| 8 | .951860 | .951249 | .950634 | .950016 | .949394 | .948769 |
| 10 | .925262 | .924320 | .923372 | .922420 | .921462 | .920498 |
| 12 | .893218 | .891884 | .890542 | .889193 | .887837 | .886473 |
| 14 | .856000 | .854219 | .852429 | .850630 | .848822 | .847004 |
| 16 | .813924 | .811651 | .809367 | .807072 | .804765 | .802448 |
| 18 | .767348 | .764546 | .761730 | .758903 | .756063 | .753210 |
| 20 | .716665 | .713307 | .709934 | .706548 | .703149 | .699735 |
| 22 | .662306 | .658375 | .654429 | .650470 | .646496 | .642509 |
| 24 | .604729 | .600220 | .595697 | .591160 | .586610 | .582046 |
| 26 | .544420 | .539340 | .534247 | .529141 | .524023 | .518892 |
| 28 | .481888 | .476254 | .470610 | .464955 | .459290 | .453616 |
| 30 | .417659 | .411500 | .405335 | .399163 | .392985 | .386801 |
| 32 | .352269 | .345628 | .338985 | .332339 | .325693 | .319047 |
| 34 | .286267 | .279195 | .272127 | .265065 | .258007 | .250956 |
| 36 | .220203 | .212763 | .205336 | .197921 | .190520 | .183134 |
| 38 | .154624 | .146890 | .139177 | .131487 | .123821 | .116179 |
| 40 | .090073 | .082127 | .074213 | .066334 | .058489 | .050679 |
| 42 | .027081 | .019014 | .010991 | .003016 | -.004912 | -.012792 |
| 44 | -.033837 | -.041927 | -.049959 | -.057930 | -.065839 | -.073686 |
| 46 | -.092187 | -.100197 | -.108132 | -.115992 | -.123775 | -.131479 |
| 48 | -.147499 | -.155319 | -.163049 | -.170687 | -.178231 | -.185681 |
| 50 | -.199332 | -.206852 | -.214263 | -.221566 | -.228757 | -.235836 |
| 52 | -.247279 | -.254385 | -.261364 | -.268216 | -.274939 | -.281532 |
| 54 | -.290968 | -.297546 | -.303979 | -.310267 | -.316408 | -.322401 |
| 56 | -.330068 | -.336006 | -.341782 | -.347394 | -.352840 | -.358121 |
| 58 | -.364289 | -.369480 | -.374490 | -.379318 | -.383963 | -.388425 |
| 60 | -.393389 | -.397729 | -.401870 | -.405812 | -.409555 | -.413097 |
| 62 | -.417170 | -.420563 | -.423740 | -.426702 | -.429448 | -.431979 |
| 64 | -.435487 | -.437844 | -.439970 | -.441866 | -.443532 | -.444970 |
| 66 | -.448243 | -.449484 | -.450482 | -.451238 | -.451752 | -.452026 |
| 68 | -.455392 | -.455451 | -.455256 | -.454808 | -.454110 | -.453163 |
| 70 | -.456940 | -.455762 | -.454322 | -.452623 | -.450666 | -.448455 |
| 72 | -.452947 | -.450491 | -.447768 | -.444782 | -.441537 | -.438035 |
| 74 | -.443520 | -.439760 | -.435733 | -.431443 | -.426893 | -.422090 |
| 76 | -.428820 | -.423747 | -.418409 | -.412812 | -.406962 | -.400863 |
| 78 | -.409055 | -.402674 | -.396037 | -.389150 | -.382019 | -.374651 |
| 80 | -.384478 | -.376815 | -.368908 | -.360765 | -.352392 | -.343797 |
| 82 | -.355391 | -.346487 | -.337358 | -.328010 | -.318452 | -.308694 |
| 84 | -.322134 | -.312050 | -.301763 | -.291281 | -.280614 | -.269773 |
| 86 | -.285088 | -.273902 | -.262541 | -.251014 | -.239332 | -.227507 |
| 88 | -.244669 | -.232477 | -.220142 | -.207677 | -.195092 | -.182401 |
| 90 | -.201325 | -.188240 | -.175051 | -.161771 | -.148412 | -.134988 |

| $\nu$ | 2.70 | 2.72 | 2.74 | 2.76 | 2.78 | 2.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.201325 | -.188240 | -.175051 | -.161770 | -.148412 | -.134988 |
| 92 | -.155533 | -.141684 | -.127776 | -.113820 | -.099833 | -.085826 |
| 94 | -.107792 | -.093326 | -.078848 | -.064373 | -.049917 | -.035493 |
| 96 | -.058622 | -.043698 | -.028815 | -.013991 | .000760 | .015423 |
| 98 | -.008556 | .006651 | .021760 | .036753 | .051614 | .066327 |
| 100 | .041859 | .057167 | .072314 | .087282 | .102056 | .116620 |
| 102 | .092076 | .107288 | .122274 | .137017 | .151501 | .165709 |
| 104 | .141543 | .156456 | .171076 | .185385 | .199368 | .213008 |
| 106 | .189713 | .204118 | .218160 | .231823 | .245092 | .257950 |
| 108 | .236049 | .249732 | .262983 | .275786 | .288125 | .299987 |
| 110 | .280026 | .292773 | .305018 | .316745 | .327941 | .338594 |
| 112 | .321138 | .332735 | .343760 | .354201 | .364045 | .373282 |
| 114 | .358900 | .369136 | .378734 | .387682 | .395972 | .403593 |
| 116 | .392855 | .401525 | .409493 | .416752 | .423293 | .429110 |
| 118 | .422573 | .429481 | .435628 | .441010 | .445621 | .449459 |
| 120 | .447661 | .452621 | .456767 | .460098 | .462613 | .464313 |
| 122 | .467759 | .470599 | .472580 | .473703 | .473973 | .473393 |
| 124 | .482549 | .483112 | .482780 | .481558 | .479453 | .476474 |
| 126 | .491751 | .489901 | .487128 | .483442 | .478856 | .473383 |
| 128 | .495132 | .490752 | .485432 | .479188 | .472039 | .464002 |
| 130 | .492501 | .485496 | .477549 | .468679 | .458910 | .448267 |
| 132 | .483712 | .474015 | .463384 | .451847 | .439432 | .426171 |
| 134 | .468664 | .456233 | .442893 | .428677 | .413621 | .397760 |
| 136 | .447301 | .432124 | .416078 | .399203 | .381540 | .363133 |
| 138 | .419611 | .401706 | .382989 | .363506 | .343307 | .322440 |
| 140 | .385620 | .365037 | .343717 | .321714 | .299082 | .275878 |
| 142 | .345394 | .322216 | .298396 | .273993 | .249069 | .223687 |
| 144 | .299030 | .273376 | .247194 | .220549 | .193509 | .166144 |
| 146 | .246655 | .218680 | .190309 | .161616 | .132675 | .103562 |
| 148 | .188415 | .158309 | .127961 | .097453 | .066864 | .036274 |
| 150 | .124467 | .092458 | .060385 | .028333 | -.003612 | -.035366 |
| 152 | .054968 | .021324 | -.012184 | -.045469 | -.078438 | -.111005 |
| 154 | -.019945 | -.054915 | -.089528 | -.123692 | -.157312 | -.190297 |
| 156 | -.100175 | -.136118 | -.171462 | -.206107 | -.239959 | -.272923 |
| 158 | -.185692 | -.222211 | -.257862 | -.292545 | -.326162 | -.358620 |
| 160 | -.276580 | -.313227 | -.348712 | -.382935 | -.415798 | -.447208 |
| 162 | -.373107 | -.409373 | -.444158 | -.477362 | -.508888 | -.538649 |
| 164 | -.475816 | -.511125 | -.544604 | -.576154 | -.605685 | -.633114 |
| 166 | -.585708 | -.619393 | -.650863 | -.680028 | -.706803 | -.731115 |
| 168 | -.704532 | -.735801 | -.764433 | -.790344 | -.813462 | -.833725 |
| 170 | -.835367 | -.863245 | -.888010 | -.909594 | -.927937 | -.942992 |
| 172 | -.983849 | -1.007056 | -1.026603 | -1.042440 | -1.054527 | -1.062841 |
| 174 | -1.161206 | -1.177897 | -1.190266 | -1.198289 | -1.201957 | -1.201274 |
| 176 | -1.393705 | -1.400752 | -1.402604 | -1.399276 | -1.390801 | -1.377232 |
| 178 | -1.767342 | -1.757494 | -1.741045 | -1.718079 | -1.688706 | -1.653059 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ $\theta$ | 2.80 | 2.82 | 2.84 | 2.86 | 2.88 | 2.90 |
|---|---|---|---|---|---|---|
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .996761 | .996721 | .996680 | .996639 | .996599 | .996558 |
| 4 | .987075 | .986914 | .986753 | .986591 | .986427 | .986264 |
| 6 | .971028 | .970671 | .970310 | .969949 | .969585 | .969218 |
| 8 | .948769 | .948139 | .947507 | .946871 | .946231 | .945587 |
| 10 | .920498 | .919529 | .918555 | .917575 | .916590 | .915600 |
| 12 | .886473 | .885102 | .883724 | .882339 | .880946 | .879547 |
| 14 | .847004 | .845177 | .843341 | .841496 | .839641 | .837778 |
| 16 | .802448 | .800120 | .797780 | .795430 | .793069 | .790698 |
| 18 | .753210 | .750345 | .747467 | .744577 | .741675 | .738761 |
| 20 | .699735 | .696309 | .692869 | .689415 | .685949 | .682470 |
| 22 | .642509 | .638507 | .634492 | .630464 | .626422 | .622368 |
| 24 | .582046 | .577469 | .572878 | .568275 | .563660 | .559031 |
| 26 | .518892 | .513750 | .508597 | .503432 | .498256 | .493070 |
| 28 | .453616 | .447932 | .442240 | .436539 | .430831 | .425115 |
| | | | | | | |
| 30 | .386801 | .380612 | .374419 | .368221 | .362020 | .355815 |
| 32 | .319047 | .312401 | .305755 | .299111 | .292469 | .285829 |
| 34 | .250956 | .243912 | .236876 | .229848 | .222829 | .215820 |
| 36 | .183134 | .175763 | .168408 | .161070 | .153750 | .146448 |
| 38 | .116179 | .108562 | .100971 | .093407 | .085871 | .078364 |
| 40 | .050679 | .042906 | .035171 | .027475 | .019818 | .012202 |
| 42 | -.012792 | -.020622 | -.028402 | -.036130 | -.043805 | -.051426 |
| 44 | -.073686 | -.081469 | -.089187 | -.096839 | -.104423 | -.111939 |
| 46 | -.131479 | -.139105 | -.146650 | -.154113 | -.161493 | -.168789 |
| 48 | -.185681 | -.193035 | -.200291 | -.207450 | -.214509 | -.221467 |
| 50 | -.235836 | -.242803 | -.249655 | -.256391 | -.263011 | -.269513 |
| 52 | -.281532 | -.287995 | -.294325 | -.300523 | -.306586 | -.312513 |
| 54 | -.322401 | -.328245 | -.333938 | -.339482 | -.344873 | -.350112 |
| 56 | -.358121 | -.363235 | -.368181 | -.372959 | -.377568 | -.382008 |
| 58 | -.388425 | -.392702 | -.396795 | -.400703 | -.404426 | -.407963 |
| | | | | | | |
| 60 | -.413097 | -.416439 | -.419580 | -.422521 | -.425261 | -.427801 |
| 62 | -.431979 | -.434295 | -.436396 | -.438282 | -.439954 | -.441412 |
| 64 | -.444970 | -.446179 | -.447161 | -.447917 | -.448446 | -.448752 |
| 66 | -.452026 | -.452061 | -.451858 | -.451420 | -.450746 | -.449840 |
| 68 | -.453163 | -.451969 | -.450530 | -.448849 | -.446927 | -.444767 |
| 70 | -.448455 | -.445993 | -.443281 | -.440324 | -.437123 | -.433683 |
| 72 | -.438035 | -.434280 | -.430276 | -.426026 | -.421535 | -.416807 |
| 74 | -.422090 | -.417036 | -.411737 | -.406197 | -.400421 | -.394415 |
| 76 | -.400863 | -.394522 | -.387943 | -.381133 | -.374098 | -.366842 |
| 78 | -.374651 | -.367052 | -.359228 | -.351187 | -.342935 | -.334480 |
| 80 | -.343797 | -.334989 | -.325974 | -.316760 | -.307356 | -.297769 |
| 82 | -.308694 | -.298743 | -.288609 | -.278300 | -.267826 | -.257196 |
| 84 | -.269773 | -.258766 | -.247605 | -.236298 | -.224856 | -.213289 |
| 86 | -.227507 | -.215549 | -.203470 | -.191280 | -.178990 | -.166612 |
| 88 | -.182401 | -.169614 | -.156744 | -.143804 | -.130804 | -.117758 |
| | | | | | | |
| 90 | -.134988 | -.121512 | -.107996 | -.094454 | -.080899 | -.067343 |

$$P_\nu(\cos \theta)$$

| ν | 2.80 | 2.82 | 2.84 | 2.86 | 2.88 | 2.90 |
|---|---|---|---|---|---|---|
| θ | | | | | | |
| 90 | -.134988 | -.121511 | -.107996 | -.094454 | -.080899 | -.067343 |
| 92 | -.085826 | -.071815 | -.057814 | -.043835 | -.029893 | -.016001 |
| 94 | -.035493 | -.021117 | -.006803 | .007434 | .021581 | .035624 |
| 96 | .015423 | .029982 | .044423 | .058730 | .072888 | .086884 |
| 98 | .066327 | .080876 | .095247 | .109423 | .123390 | .137134 |
| 100 | .116620 | .130957 | .145053 | .158891 | .172458 | .185739 |
| 102 | .165709 | .179625 | .193235 | .206524 | .219476 | .232079 |
| 104 | .213008 | .226291 | .239201 | .251725 | .263848 | .275557 |
| 106 | .257950 | .270384 | .282380 | .293923 | .305002 | .315605 |
| 108 | .299987 | .311358 | .322225 | .332576 | .342401 | .351689 |
| 110 | .338594 | .348692 | .358222 | .367176 | .375542 | .383314 |
| 112 | .373282 | .381901 | .389894 | .397251 | .403967 | .410033 |
| 114 | .403593 | .410539 | .416802 | .422377 | .427260 | .431446 |
| 116 | .429110 | .434199 | .438555 | .442176 | .445061 | .447208 |
| 118 | .449459 | .452522 | .454809 | .456322 | .457061 | .457030 |
| 120 | .464313 | .465198 | .465273 | .464542 | .463010 | .460685 |
| 122 | .473393 | .471970 | .469710 | .466623 | .462718 | .458007 |
| 124 | .476474 | .472633 | .467940 | .462409 | .456055 | .448895 |
| 126 | .473383 | .467039 | .459841 | .451807 | .442956 | .433310 |
| 128 | .464002 | .455098 | .445350 | .434781 | .423417 | .411283 |
| 130 | .448267 | .436775 | .424464 | .411361 | .397497 | .382905 |
| 132 | .426171 | .412094 | .397236 | .381633 | .365319 | .348333 |
| 134 | .397760 | .381134 | .363781 | .345744 | .327063 | .307783 |
| 136 | .363133 | .344026 | .324265 | .303897 | .282969 | .261532 |
| 138 | .322440 | .300957 | .278909 | .256349 | .233331 | .209909 |
| 140 | .275878 | .252159 | .227982 | .203407 | .178492 | .153298 |
| 142 | .223687 | .197909 | .171799 | .145422 | .118842 | .092123 |
| 144 | .166144 | .138523 | .110713 | .082786 | .054810 | .026854 |
| 146 | .103562 | .074349 | .045112 | .015925 | -.013139 | -.042008 |
| 148 | .036274 | .005763 | -.024591 | -.054711 | -.084519 | -.113939 |
| 150 | -.035366 | -.066845 | -.097968 | -.128653 | -.158821 | -.188393 |
| 152 | -.111005 | -.143081 | -.174583 | -.205426 | -.235530 | -.264817 |
| 154 | -.190297 | -.222557 | -.254006 | -.284560 | -.314139 | -.342663 |
| 156 | -.272923 | -.304910 | -.335833 | -.365608 | -.394155 | -.421399 |
| 158 | -.358620 | -.389828 | -.419702 | -.448160 | -.475126 | -.500528 |
| 160 | -.447208 | -.477080 | -.505330 | -.531880 | -.556661 | -.579605 |
| 162 | -.538649 | -.566561 | -.592547 | -.616537 | -.638465 | -.658274 |
| 164 | -.633114 | -.658364 | -.681367 | -.702060 | -.720389 | -.736308 |
| 166 | -.731115 | -.752897 | -.772089 | -.788642 | -.802515 | -.813678 |
| 168 | -.833725 | -.851078 | -.865477 | -.876890 | -.885292 | -.890671 |
| 170 | -.942992 | -.954725 | -.963111 | -.968137 | -.969801 | -.968116 |
| 172 | -1.062841 | -1.067368 | -1.068112 | -1.065087 | -1.058321 | -1.047854 |
| 174 | -1.201274 | -1.196263 | -1.186961 | -1.173419 | -1.155707 | -1.133903 |
| 176 | -1.377232 | -1.358638 | -1.335109 | -1.306750 | -1.273686 | -1.236057 |
| 178 | -1.653059 | -1.611295 | -1.563592 | -1.510151 | -1.451193 | -1.386958 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 2.90 | 2.92 | 2.94 | 2.96 | 2.98 | 3.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .996558 | .996516 | .996474 | .996432 | .996390 | .996347 |
| 4 | .986264 | .986098 | .985932 | .985765 | .985597 | .985429 |
| 6 | .969218 | .968850 | .968479 | .968107 | .967733 | .967356 |
| 8 | .945587 | .944940 | .944290 | .943635 | .942977 | .942316 |
| 10 | .915600 | .914604 | .913603 | .912597 | .911585 | .910568 |
| 12 | .879547 | .878140 | .876726 | .875305 | .873876 | .872441 |
| 14 | .837778 | .835905 | .834024 | .832134 | .830234 | .828326 |
| 16 | .790698 | .788315 | .785922 | .783519 | .781104 | .778680 |
| 18 | .738761 | .735835 | .732897 | .729947 | .726985 | .724012 |
| 20 | .682470 | .678978 | .675474 | .671956 | .668426 | .664884 |
| 22 | .622368 | .618300 | .614220 | .610127 | .606022 | .601904 |
| 24 | .559031 | .554391 | .549739 | .545076 | .540401 | .535715 |
| 26 | .493070 | .487874 | .482667 | .477452 | .472226 | .466992 |
| 28 | .425115 | .419392 | .413662 | .407925 | .402183 | .396435 |
| 30 | .355815 | .349607 | .343397 | .337186 | .330973 | .324759 |
| 32 | .285829 | .279192 | .272559 | .265930 | .259306 | .252687 |
| 34 | .215820 | .208821 | .201833 | .194858 | .187894 | .180944 |
| 36 | .146448 | .139166 | .131904 | .124662 | .117442 | .110245 |
| 38 | .078364 | .070887 | .063441 | .056026 | .048643 | .041293 |
| 40 | .012202 | .004628 | -.002903 | -.010391 | -.017835 | -.025233 |
| 42 | -.051426 | -.058992 | -.066502 | -.073955 | -.081350 | -.088686 |
| 44 | -.111939 | -.119385 | -.126761 | -.134065 | -.141296 | -.148454 |
| 46 | -.168789 | -.175999 | -.183124 | -.190161 | -.197109 | -.203968 |
| 48 | -.221467 | -.228324 | -.235078 | -.241727 | -.248272 | -.254711 |
| 50 | -.269513 | -.275896 | -.282159 | -.288302 | -.294322 | -.300220 |
| 52 | -.312513 | -.318305 | -.323960 | -.329476 | -.334854 | -.340092 |
| 54 | -.350112 | -.355197 | -.360128 | -.364905 | -.369525 | -.373990 |
| 56 | -.382008 | -.386277 | -.390376 | -.394304 | -.398060 | -.401644 |
| 58 | -.407963 | -.411314 | -.414479 | -.417457 | -.420250 | -.422856 |
| 60 | -.427801 | -.430141 | -.432280 | -.434219 | -.435959 | -.437499 |
| 62 | -.441412 | -.442658 | -.443691 | -.444512 | -.445123 | -.445524 |
| 64 | -.448752 | -.448833 | -.448693 | -.448332 | -.447751 | -.446953 |
| 66 | -.449840 | -.448703 | -.447337 | -.445744 | -.443925 | -.441884 |
| 68 | -.444767 | -.442371 | -.439743 | -.436884 | -.433798 | -.430488 |
| 70 | -.433683 | -.430007 | -.426098 | -.421959 | -.417595 | -.413008 |
| 72 | -.416807 | -.411845 | -.406655 | -.401240 | -.395605 | -.389754 |
| 74 | -.394415 | -.388182 | -.381730 | -.375061 | -.368183 | -.361101 |
| 76 | -.366842 | -.359373 | -.351697 | -.343819 | -.335746 | -.327485 |
| 78 | -.334480 | -.325828 | -.316986 | -.307963 | -.298764 | -.289398 |
| 80 | -.297769 | -.288007 | -.278079 | -.267994 | -.257758 | -.247381 |
| 82 | -.257196 | -.246418 | -.235502 | -.224458 | -.213294 | -.202020 |
| 84 | -.213289 | -.201607 | -.189821 | -.177940 | -.165976 | -.153937 |
| 86 | -.166612 | -.154157 | -.141636 | -.129059 | -.116439 | -.103786 |
| 88 | -.117758 | -.104677 | -.091573 | -.078458 | -.065344 | -.052243 |
| 90 | -.067343 | -.053799 | -.040281 | -.026799 | -.013368 | -.000000 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 2.90 | 2.92 | 2.94 | 2.96 | 2.98 | 3.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.067343 | -.053799 | -.040280 | -.026799 | -.013368 | .000000 |
| 92 | -.016001 | -.002172 | .011579 | .025241 | .038800 | .052243 |
| 94 | .035624 | .049547 | .063339 | .076985 | .090471 | .103786 |
| 96 | .086884 | .100703 | .114331 | .127755 | .140961 | .153937 |
| 98 | .137134 | .150641 | .163896 | .176886 | .189599 | .202020 |
| 100 | .185739 | .198720 | .211388 | .223729 | .235731 | .247381 |
| 102 | .232079 | .244319 | .256183 | .267659 | .278734 | .289398 |
| 104 | .275557 | .286841 | .297687 | .308083 | .318019 | .327486 |
| 106 | .315605 | .325720 | .335337 | .344445 | .353036 | .361101 |
| 108 | .351689 | .360429 | .368614 | .376234 | .383283 | .389754 |
| 110 | .383314 | .390483 | .397043 | .402986 | .408309 | .413008 |
| 112 | .410033 | .415446 | .420201 | .424294 | .427724 | .430488 |
| 114 | .431446 | .434934 | .437721 | .439808 | .441195 | .441884 |
| 116 | .447208 | .448619 | .449295 | .449240 | .448457 | .446953 |
| 118 | .457030 | .456234 | .454678 | .452369 | .449314 | .445524 |
| | | | | | | |
| 120 | .460685 | .457576 | .453691 | .449041 | .443640 | .437499 |
| 122 | .458007 | .452503 | .446220 | .439173 | .431379 | .422856 |
| 124 | .448895 | .440944 | .432223 | .422752 | .412551 | .401644 |
| 126 | .433310 | .422892 | .411726 | .399835 | .387248 | .373990 |
| 128 | .411283 | .398408 | .384820 | .370551 | .355631 | .340092 |
| 130 | .382905 | .367618 | .351669 | .335096 | .317933 | .300220 |
| 132 | .348333 | .330713 | .312500 | .293734 | .274457 | .254711 |
| 134 | .307783 | .287947 | .267602 | .246792 | .225565 | .203968 |
| 136 | .261532 | .239633 | .217325 | .194658 | .171683 | .148454 |
| 138 | .209909 | .186139 | .162075 | .137774 | .113292 | .088686 |
| 140 | .153298 | .127883 | .102309 | .076636 | .050924 | .025233 |
| 142 | .092123 | .065331 | .038529 | .011782 | -.014846 | -.041293 |
| 144 | .026854 | -.001012 | -.028723 | -.056209 | -.083405 | -.110245 |
| 146 | -.042008 | -.070610 | -.098873 | -.126729 | -.154108 | -.180944 |
| 148 | -.113939 | -.142898 | -.171322 | -.199141 | -.226285 | -.252687 |
| | | | | | | |
| 150 | -.188393 | -.217294 | -.245452 | -.272794 | -.299252 | -.324759 |
| 152 | -.264817 | -.293210 | -.320637 | -.347028 | -.372315 | -.396435 |
| 154 | -.342663 | -.370059 | -.396255 | -.421185 | -.444784 | -.466992 |
| 156 | -.421399 | -.447269 | -.471696 | -.494617 | -.515975 | -.535715 |
| 158 | -.500528 | -.524297 | -.546374 | -.566700 | -.585225 | -.601904 |
| 160 | -.579605 | -.600652 | -.619748 | -.636846 | -.651903 | -.664885 |
| 162 | -.658274 | -.675915 | -.691342 | -.704519 | -.715416 | -.724012 |
| 164 | -.736308 | -.749779 | -.760769 | -.769259 | -.775231 | -.778680 |
| 166 | -.813678 | -.822106 | -.827785 | -.830711 | -.830887 | -.828326 |
| 168 | -.890671 | -.893022 | -.892353 | -.888680 | -.882031 | -.872441 |
| 170 | -.968116 | -.963101 | -.954789 | -.943225 | -.928463 | -.910569 |
| 172 | -1.047854 | -1.033740 | -1.016046 | -.994848 | -.970238 | -.942316 |
| 174 | -1.133903 | -1.108104 | -1.078421 | -1.044975 | -1.007904 | -.967356 |
| 176 | -1.236057 | -1.194017 | -1.147742 | -1.097416 | -1.043240 | -.985429 |
| 178 | -1.386958 | -1.317707 | -1.243718 | -1.165285 | -1.082720 | -.996347 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | -1.000000 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 3.00 | 3.02 | 3.04 | 3.06 | 3.08 | 3.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .996347 | .996305 | .996262 | .996219 | .996175 | .996132 |
| 4 | .985429 | .985258 | .985088 | .984916 | .984743 | .984570 |
| 6 | .967356 | .966977 | .966596 | .966213 | .965828 | .965441 |
| 8 | .942316 | .941651 | .940983 | .940311 | .939635 | .938956 |
| 10 | .910568 | .909546 | .908519 | .907486 | .906448 | .905405 |
| 12 | .872441 | .870998 | .869548 | .868092 | .866628 | .865157 |
| 14 | .828326 | .826409 | .824483 | .822548 | .820605 | .818653 |
| 16 | .778680 | .776244 | .773799 | .771343 | .768877 | .766401 |
| 18 | .724012 | .721026 | .718030 | .715022 | .712003 | .708972 |
| 20 | .664884 | .661330 | .657764 | .654186 | .650596 | .646994 |
| 22 | .601904 | .597775 | .593633 | .589480 | .585316 | .581140 |
| 24 | .535715 | .531018 | .526310 | .521592 | .516864 | .512126 |
| 26 | .466992 | .461749 | .456498 | .451239 | .445972 | .440698 |
| 28 | .396435 | .390682 | .384924 | .379162 | .373396 | .367626 |
| 30 | .324759 | .318545 | .312331 | .306118 | .299906 | .293695 |
| 32 | .252687 | .246075 | .239468 | .232869 | .226278 | .219695 |
| 34 | .180944 | .174007 | .167085 | .160179 | .153288 | .146413 |
| 36 | .110245 | .103071 | .095921 | .088796 | .081696 | .074622 |
| 38 | .041293 | .033978 | .026697 | .019453 | .012245 | .005075 |
| 40 | −.025233 | −.032585 | −.039889 | −.047145 | −.054351 | −.061508 |
| 42 | −.088686 | −.095962 | −.103176 | −.110329 | −.117418 | −.124444 |
| 44 | −.148454 | −.155536 | −.162543 | −.169472 | −.176324 | −.183097 |
| 46 | −.203968 | −.210736 | −.217413 | −.223997 | −.230487 | −.236883 |
| 48 | −.254711 | −.261043 | −.267267 | −.273382 | −.279387 | −.285282 |
| 50 | −.300220 | −.305994 | −.311644 | −.317168 | −.322566 | −.327836 |
| 52 | −.340092 | −.345190 | −.350147 | −.354962 | −.359634 | −.364163 |
| 54 | −.373990 | −.378299 | −.382449 | −.386443 | −.390278 | −.393955 |
| 56 | −.401644 | −.405057 | −.408297 | −.411364 | −.414259 | −.416981 |
| 58 | −.422856 | −.425276 | −.427509 | −.429557 | −.431419 | −.433096 |
| 60 | −.437499 | −.438841 | −.439985 | −.440931 | −.441681 | −.442234 |
| 62 | −.445524 | −.445716 | −.445700 | −.445477 | −.445049 | −.444417 |
| 64 | −.446953 | −.445938 | −.444708 | −.443265 | −.441611 | −.439748 |
| 66 | −.441884 | −.439621 | −.437140 | −.434444 | −.431533 | −.428412 |
| 68 | −.430488 | −.426956 | −.423205 | −.419239 | −.415061 | −.410675 |
| 70 | −.413008 | −.408203 | −.403183 | −.397952 | −.392516 | −.386877 |
| 72 | −.389754 | −.383692 | −.377424 | −.370955 | −.364289 | −.357432 |
| 74 | −.361101 | −.353820 | −.346345 | −.338684 | −.330840 | −.322822 |
| 76 | −.327485 | −.319043 | −.310425 | −.301638 | −.292690 | −.283587 |
| 78 | −.289398 | −.279873 | −.270195 | −.260372 | −.250412 | −.240324 |
| 80 | −.247381 | −.236872 | −.226238 | −.215488 | −.204632 | −.193676 |
| 82 | −.202020 | −.190645 | −.179179 | −.167632 | −.156012 | −.144329 |
| 84 | −.153937 | −.141835 | −.129679 | −.117480 | −.105249 | −.092995 |
| 86 | −.103786 | −.091111 | −.078425 | −.065740 | −.053066 | −.040414 |
| 88 | −.052243 | −.039166 | −.026125 | −.013132 | −.000199 | .012663 |
| 90 | −.000000 | .013293 | .026500 | .039608 | .052606 | .065480 |

$$P_\nu(\cos\theta)$$

| ν | 3.00 | 3.02 | 3.04 | 3.06 | 3.08 | 3.10 |
|---|------|------|------|------|------|------|
| θ | | | | | | |
| 90 | .000000 | .013294 | .026501 | .039609 | .052606 | .065481 |
| 92 | .052243 | .065557 | .078731 | .091751 | .104607 | .117285 |
| 94 | .103786 | .116915 | .129847 | .142570 | .155070 | .167337 |
| 96 | .153937 | .166669 | .179145 | .191353 | .203282 | .214919 |
| 98 | .202020 | .214138 | .225941 | .237418 | .248556 | .259346 |
| 100 | .247381 | .258669 | .269582 | .280109 | .290242 | .299969 |
| 102 | .289398 | .299640 | .309449 | .318816 | .327732 | .336188 |
| 104 | .327486 | .336472 | .344970 | .352972 | .360470 | .367457 |
| 106 | .361101 | .368632 | .375623 | .382066 | .387957 | .393290 |
| 108 | .389754 | .395641 | .400940 | .405646 | .409756 | .413267 |
| 110 | .413008 | .417078 | .420518 | .423325 | .425501 | .427044 |
| 112 | .430488 | .432586 | .434019 | .434789 | .434897 | .434347 |
| 114 | .441884 | .441877 | .441179 | .439794 | .437728 | .434987 |
| 116 | .446953 | .444732 | .441803 | .438174 | .433855 | .428856 |
| 118 | .445524 | .441007 | .435776 | .429843 | .423222 | .415927 |
| 120 | .437499 | .430635 | .423061 | .414796 | .405856 | .396261 |
| 122 | .422856 | .413622 | .403698 | .393105 | .381865 | .370002 |
| 124 | .401644 | .390054 | .377806 | .364926 | .351440 | .337376 |
| 126 | .373990 | .360092 | .345582 | .330490 | .314849 | .298691 |
| 128 | .340092 | .323969 | .307296 | .290108 | .272441 | .254332 |
| 130 | .300220 | .281994 | .263294 | .244160 | .224634 | .204756 |
| 132 | .254711 | .234540 | .213988 | .193099 | .171919 | .150491 |
| 134 | .203968 | .182049 | .159857 | .137440 | .114847 | .092128 |
| 136 | .148454 | .125021 | .101438 | .077757 | .054031 | .030312 |
| 138 | .088686 | .064011 | .039323 | .014678 | -.009866 | -.034258 |
| 140 | .025233 | -.000377 | -.025848 | -.051121 | -.076137 | -.100841 |
| 142 | -.041293 | -.067497 | -.093395 | -.118928 | -.144037 | -.168662 |
| 144 | -.110245 | -.136666 | -.162603 | -.187997 | -.212787 | -.236915 |
| 146 | -.180944 | -.207172 | -.232730 | -.257555 | -.281589 | -.304774 |
| 148 | -.252687 | -.278284 | -.303012 | -.326812 | -.349626 | -.371400 |
| 150 | -.324759 | -.349254 | -.372675 | -.394966 | -.416073 | -.435946 |
| 152 | -.396435 | -.419329 | -.440939 | -.461213 | -.480103 | -.497563 |
| 154 | -.466992 | -.487756 | -.507023 | -.524748 | -.540887 | -.555405 |
| 156 | -.535715 | -.553789 | -.570154 | -.584770 | -.597605 | -.608630 |
| 158 | -.601904 | -.616696 | -.629567 | -.640489 | -.649438 | -.656400 |
| 160 | -.664885 | -.675761 | -.684511 | -.691117 | -.695571 | -.697869 |
| 162 | -.724012 | -.730290 | -.734242 | -.735869 | -.735175 | -.732175 |
| 164 | -.778680 | -.779606 | -.778021 | -.773940 | -.767390 | -.758402 |
| 166 | -.828326 | -.823050 | -.815089 | -.804482 | -.791277 | -.775528 |
| 168 | -.872441 | -.859956 | -.844632 | -.826534 | -.805735 | -.782317 |
| 170 | -.910569 | -.889617 | -.865695 | -.838893 | -.809330 | -.777106 |
| 172 | -.942316 | -.911196 | -.877000 | -.839863 | -.799926 | -.757344 |
| 174 | -.967356 | -.923490 | -.876479 | -.826504 | -.773757 | -.718439 |
| 176 | -.985429 | -.924208 | -.859818 | -.792507 | -.722532 | -.650163 |
| 178 | -.996347 | -.906505 | -.813545 | -.717825 | -.619718 | -.519600 |
| 180 | -1.000000 | ∞ | ∞ | ∞ | ∞ | ∞ |

$$P_{\nu}(\cos \theta)$$

| $\nu$ | 3.10 | 3.12 | 3.14 | 3.16 | 3.18 | 3.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .996132 | .996087 | .996043 | .995999 | .995954 | .995909 |
| 4 | .984570 | .984395 | .984219 | .984043 | .983865 | .983687 |
| 6 | .965441 | .965052 | .964660 | .964267 | .963872 | .963475 |
| 8 | .938956 | .938273 | .937587 | .936898 | .936204 | .935508 |
| 10 | .905405 | .904357 | .903303 | .902245 | .901181 | .900112 |
| 12 | .865157 | .863679 | .862195 | .860703 | .859205 | .857699 |
| 14 | .818653 | .816692 | .814722 | .812744 | .810757 | .808762 |
| 16 | .766401 | .763914 | .761418 | .758911 | .756395 | .753868 |
| 18 | .708972 | .705931 | .702878 | .699814 | .696740 | .693654 |
| 20 | .646994 | .643381 | .639756 | .636121 | .632473 | .628815 |
| 22 | .581140 | .576953 | .572756 | .568547 | .564328 | .560099 |
| 24 | .512126 | .507378 | .502621 | .497854 | .493079 | .488294 |
| 26 | .440698 | .435416 | .430127 | .424833 | .419532 | .414225 |
| 28 | .367626 | .361852 | .356076 | .350298 | .344517 | .338735 |
| 30 | .293695 | .287486 | .281280 | .275077 | .268878 | .262682 |
| 32 | .219695 | .213121 | .206556 | .200001 | .193457 | .186924 |
| 34 | .146413 | .139556 | .132716 | .125895 | .119094 | .112311 |
| 36 | .074622 | .067576 | .060557 | .053566 | .046605 | .039674 |
| 38 | .005075 | -.002057 | -.009150 | -.016202 | -.023215 | -.030185 |
| 40 | -.061508 | -.068614 | -.075667 | -.082668 | -.089615 | -.096508 |
| 42 | -.124444 | -.131405 | -.138299 | -.145128 | -.151888 | -.158580 |
| 44 | -.183097 | -.189790 | -.196402 | -.202932 | -.209380 | -.215745 |
| 46 | -.236883 | -.243183 | -.249387 | -.255494 | -.261503 | -.267412 |
| 48 | -.285282 | -.291064 | -.296735 | -.302292 | -.307735 | -.313064 |
| 50 | -.327836 | -.332980 | -.337994 | -.342880 | -.347635 | -.352261 |
| 52 | -.364163 | -.368549 | -.372791 | -.376888 | -.380840 | -.384646 |
| 54 | -.393955 | -.397473 | -.400832 | -.404031 | -.407072 | -.409952 |
| 56 | -.416981 | -.419530 | -.421907 | -.424111 | -.426143 | -.428002 |
| 58 | -.433096 | -.434587 | -.435894 | -.437017 | -.437956 | -.438712 |
| 60 | -.442234 | -.442592 | -.442756 | -.442727 | -.442505 | -.442093 |
| 62 | -.444417 | -.443582 | -.442546 | -.441310 | -.439876 | -.438246 |
| 64 | -.439748 | -.437678 | -.435402 | -.432924 | -.430244 | -.427367 |
| 66 | -.428412 | -.425083 | -.421548 | -.417811 | -.413874 | -.409740 |
| 68 | -.410675 | -.406083 | -.401289 | -.396297 | -.391111 | -.385734 |
| 70 | -.386877 | -.381040 | -.375009 | -.368789 | -.362384 | -.355800 |
| 72 | -.357432 | -.350389 | -.343165 | -.335765 | -.328195 | -.320460 |
| 74 | -.322822 | -.314633 | -.306281 | -.297772 | -.289111 | -.280306 |
| 76 | -.283587 | -.274335 | -.264943 | -.255417 | -.245763 | -.235990 |
| 78 | -.240324 | -.230113 | -.219789 | -.209360 | -.198832 | -.188215 |
| 80 | -.193676 | -.182631 | -.171505 | -.160306 | -.149044 | -.137726 |
| 82 | -.144329 | -.132592 | -.120812 | -.108997 | -.097157 | -.085301 |
| 84 | -.092995 | -.080728 | -.068460 | -.056199 | -.043956 | -.031741 |
| 86 | -.040414 | -.027794 | -.015219 | -.002697 | .009759 | .022141 |
| 88 | .012663 | .025444 | .038133 | .050717 | .063186 | .075530 |
| 90 | .065480 | .078221 | .090817 | .103255 | .115527 | .127620 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 3.10 | 3.12 | 3.14 | 3.16 | 3.18 | 3.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .065481 | .078221 | .090817 | .103256 | .115527 | .127620 |
| 92 | .117285 | .129775 | .142064 | .154142 | .165998 | .177622 |
| 94 | .167337 | .179359 | .191124 | .202623 | .213844 | .224778 |
| 96 | .214919 | .226255 | .237277 | .247977 | .258343 | .268367 |
| 98 | .259346 | .269776 | .279838 | .289522 | .298819 | .307720 |
| 100 | .299969 | .309281 | .318171 | .326629 | .334647 | .342220 |
| 102 | .336188 | .344176 | .351690 | .358722 | .365266 | .371318 |
| 104 | .367457 | .373927 | .379874 | .385294 | .390183 | .394536 |
| 106 | .393290 | .398061 | .402268 | .405907 | .408976 | .411476 |
| 108 | .413267 | .416179 | .418490 | .420200 | .421310 | .421821 |
| 110 | .427044 | .427955 | .428238 | .427895 | .426929 | .425346 |
| 112 | .434347 | .433144 | .431292 | .428798 | .425669 | .421913 |
| 114 | .434987 | .431581 | .427517 | .422805 | .417456 | .411481 |
| 116 | .428856 | .423188 | .416865 | .409900 | .402308 | .394103 |
| 118 | .415927 | .407973 | .399378 | .390159 | .380334 | .369923 |
| | | | | | | |
| 120 | .396261 | .386030 | .375185 | .363747 | .351738 | .339183 |
| 122 | .370002 | .357539 | .344503 | .330918 | .316812 | .302212 |
| 124 | .337376 | .322764 | .307632 | .292011 | .275932 | .259427 |
| 126 | .298691 | .282049 | .264957 | .247449 | .229561 | .211328 |
| 128 | .254332 | .235819 | .216939 | .197732 | .178237 | .158492 |
| 130 | .204756 | .184569 | .164113 | .143432 | .122569 | .101566 |
| 132 | .150491 | .128864 | .107081 | .085189 | .063233 | .041260 |
| 134 | .092128 | .069330 | .046505 | .023699 | .000962 | -.021656 |
| 136 | .030312 | .006652 | -.016897 | -.040284 | -.063459 | -.086372 |
| 138 | -.034258 | -.058441 | -.082362 | -.105969 | -.129209 | -.152032 |
| 140 | -.100841 | -.125176 | -.149088 | -.172523 | -.195428 | -.217754 |
| 142 | -.168662 | -.192748 | -.216241 | -.239086 | -.261232 | -.282630 |
| 144 | -.236915 | -.260326 | -.282965 | -.304780 | -.325722 | -.345745 |
| 146 | -.304774 | -.327058 | -.348387 | -.368713 | -.387989 | -.406172 |
| 148 | -.371400 | -.392084 | -.411628 | -.429988 | -.447121 | -.462990 |
| | | | | | | |
| 150 | -.435946 | -.454537 | -.471804 | -.487707 | -.502211 | -.515283 |
| 152 | -.497563 | -.513552 | -.528035 | -.540980 | -.552358 | -.562145 |
| 154 | -.555405 | -.568267 | -.579446 | -.588920 | -.596669 | -.602681 |
| 156 | -.608630 | -.617823 | -.625165 | -.630646 | -.634257 | -.636000 |
| 158 | -.656400 | -.661361 | -.664319 | -.665274 | -.664232 | -.661207 |
| 160 | -.697869 | -.698016 | -.696021 | -.691901 | -.685678 | -.677383 |
| 162 | -.732175 | -.726889 | -.719346 | -.709578 | -.697628 | -.683543 |
| 164 | -.758402 | -.747017 | -.733284 | -.717257 | -.698998 | -.678576 |
| 166 | -.775528 | -.757299 | -.736663 | -.713697 | -.688487 | -.661127 |
| 168 | -.782317 | -.756371 | -.727995 | -.697297 | -.664388 | -.629391 |
| 170 | -.777106 | -.742348 | -.705186 | -.665760 | -.624214 | -.580700 |
| 172 | -.757344 | -.712277 | -.664893 | -.615370 | -.563890 | -.510643 |
| 174 | -.718439 | -.660760 | -.600937 | -.539193 | -.475759 | -.410868 |
| 176 | -.650163 | -.575675 | -.499349 | -.421473 | -.342340 | -.262247 |
| 178 | -.519600 | -.417856 | -.314875 | -.211049 | -.106772 | -.002440 |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$P_\nu(\cos\theta)$$

| $\nu$ | 3.20 | 3.22 | 3.24 | 3.26 | 3.28 | 3.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .995909 | .995864 | .995819 | .995773 | .995727 | .995681 |
| 4 | .983687 | .983507 | .983327 | .983146 | .982964 | .982780 |
| 6 | .963475 | .963075 | .962674 | .962270 | .961864 | .961456 |
| 8 | .935508 | .934807 | .934103 | .933396 | .932685 | .931971 |
| 10 | .900112 | .899037 | .897958 | .896873 | .895784 | .894688 |
| 12 | .857699 | .856186 | .854667 | .853141 | .851608 | .850068 |
| 14 | .808762 | .806758 | .804746 | .802725 | .800696 | .798658 |
| 16 | .753868 | .751332 | .748786 | .746231 | .743665 | .741089 |
| 18 | .693654 | .690558 | .687452 | .684334 | .681206 | .678068 |
| 20 | .628815 | .625146 | .621466 | .617776 | .614075 | .610363 |
| 22 | .560099 | .555859 | .551609 | .547350 | .543080 | .538801 |
| 24 | .488294 | .483501 | .478701 | .473892 | .469075 | .464250 |
| 26 | .414225 | .408912 | .403595 | .398272 | .392945 | .387613 |
| 28 | .338735 | .332951 | .327167 | .321382 | .315597 | .309812 |
| 30 | .262682 | .256491 | .250305 | .244124 | .237948 | .231780 |
| 32 | .186924 | .180403 | .173893 | .167397 | .160914 | .154444 |
| 34 | .112311 | .105550 | .098809 | .092090 | .085394 | .078720 |
| 36 | .039674 | .032774 | .025905 | .019068 | .012264 | .005493 |
| 38 | -.030185 | -.037114 | -.043999 | -.050840 | -.057636 | -.064387 |
| 40 | -.096508 | -.103346 | -.110127 | -.116851 | -.123517 | -.130125 |
| 42 | -.158580 | -.165202 | -.171754 | -.178235 | -.184644 | -.190981 |
| 44 | -.215745 | -.222025 | -.228220 | -.234329 | -.240351 | -.246285 |
| 46 | -.267412 | -.273222 | -.278931 | -.284539 | -.290044 | -.295447 |
| 48 | -.313064 | -.318277 | -.323374 | -.328354 | -.333216 | -.337961 |
| 50 | -.352261 | -.356755 | -.361118 | -.365348 | -.369447 | -.373412 |
| 52 | -.384646 | -.388306 | -.391821 | -.395188 | -.398410 | -.401484 |
| 54 | -.409952 | -.412673 | -.415234 | -.417636 | -.419877 | -.421960 |
| 56 | -.428002 | -.429690 | -.431205 | -.432550 | -.433723 | -.434727 |
| 58 | -.438712 | -.439287 | -.439679 | -.439891 | -.439923 | -.439776 |
| 60 | -.442093 | -.441490 | -.440698 | -.439719 | -.438554 | -.437204 |
| 62 | -.438246 | -.436420 | -.434402 | -.432193 | -.429794 | -.427209 |
| 64 | -.427367 | -.424293 | -.421026 | -.417567 | -.413920 | -.410087 |
| 66 | -.409740 | -.405413 | -.400895 | -.396190 | -.391302 | -.386233 |
| 68 | -.385734 | -.380171 | -.374424 | -.368499 | -.362399 | -.356128 |
| 70 | -.355800 | -.349039 | -.342108 | -.335011 | -.327753 | -.320338 |
| 72 | -.320460 | -.312565 | -.304516 | -.296320 | -.287980 | -.279504 |
| 74 | -.280306 | -.271362 | -.262286 | -.253085 | -.243764 | -.234330 |
| 76 | -.235990 | -.226105 | -.216113 | -.206024 | -.195844 | -.185580 |
| 78 | -.188215 | -.177516 | -.166743 | -.155905 | -.145008 | -.134061 |
| 80 | -.137726 | -.126362 | -.114961 | -.103530 | -.092080 | -.080618 |
| 82 | -.085301 | -.073439 | -.061580 | -.049733 | -.037908 | -.026114 |
| 84 | -.031741 | -.019563 | -.007433 | .004638 | .016643 | .028572 |
| 86 | .022141 | .034437 | .046638 | .058733 | .070712 | .082566 |
| 88 | .075530 | .087738 | .099799 | .111704 | .123442 | .135004 |
| 90 | .127620 | .139524 | .151229 | .162724 | .174001 | .185049 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 3.20 | 3.22 | 3.24 | 3.26 | 3.28 | 3.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .127620 | .139524 | .151229 | .162725 | .174001 | .185049 |
| 92 | .177622 | .189002 | .200130 | .210994 | .221587 | .231898 |
| 94 | .224778 | .235513 | .245742 | .255755 | .265443 | .274797 |
| 96 | .268367 | .278040 | .287353 | .296297 | .304865 | .313050 |
| 98 | .307720 | .316217 | .324303 | .331971 | .339214 | .346027 |
| 100 | .342220 | .349339 | .356000 | .362196 | .367923 | .373176 |
| 102 | .371318 | .376871 | .381922 | .386467 | .390504 | .394029 |
| 104 | .394536 | .398352 | .401628 | .404363 | .406556 | .408208 |
| 106 | .411476 | .413404 | .414763 | .415552 | .415773 | .415430 |
| 108 | .421821 | .421737 | .421060 | .419794 | .417944 | .415515 |
| 110 | .425346 | .423150 | .420349 | .416949 | .412958 | .408385 |
| 112 | .421913 | .417539 | .412556 | .406975 | .400808 | .394066 |
| 114 | .411481 | .404894 | .397706 | .389933 | .381589 | .372690 |
| 116 | .394103 | .385302 | .375922 | .365981 | .355498 | .344492 |
| 118 | .369923 | .358946 | .347424 | .335379 | .322833 | .309810 |
| 120 | .339183 | .326105 | .312529 | .298482 | .283989 | .269078 |
| 122 | .302212 | .287147 | .271645 | .255737 | .239453 | .222822 |
| 124 | .259427 | .242528 | .225267 | .207679 | .189797 | .171655 |
| 126 | .211328 | .192787 | .173973 | .154924 | .135677 | .116269 |
| 128 | .158492 | .138538 | .118414 | .098161 | .077818 | .057426 |
| 130 | .101566 | .080465 | .059311 | .038145 | .017011 | -.004049 |
| 132 | .041260 | .019315 | -.002555 | -.024308 | -.045899 | -.067282 |
| 134 | -.021656 | -.044112 | -.066355 | -.088341 | -.110022 | -.131356 |
| 136 | -.086372 | -.108973 | -.131215 | -.153051 | -.174434 | -.195319 |
| 138 | -.152032 | -.174389 | -.196230 | -.217510 | -.238182 | -.258203 |
| 140 | -.217754 | -.239450 | -.260471 | -.280769 | -.300302 | -.319027 |
| 142 | -.282630 | -.303233 | -.322994 | -.341870 | -.359822 | -.376809 |
| 144 | -.345745 | -.364802 | -.382852 | -.399855 | -.415775 | -.430577 |
| 146 | -.406172 | -.423221 | -.439098 | -.453770 | -.467204 | -.479374 |
| 148 | -.462990 | -.477559 | -.490797 | -.502677 | -.513172 | -.522264 |
| 150 | -.515283 | -.526896 | -.537026 | -.545654 | -.552763 | -.558341 |
| 152 | -.562145 | -.570324 | -.576879 | -.581800 | -.585082 | -.586724 |
| 154 | -.602681 | -.606946 | -.609463 | -.610231 | -.609258 | -.606555 |
| 156 | -.636000 | -.635876 | -.633896 | -.630074 | -.624431 | -.616992 |
| 158 | -.661207 | -.656218 | -.649288 | -.640449 | -.629734 | -.617186 |
| 160 | -.677383 | -.667050 | -.654720 | -.640441 | -.624264 | -.606250 |
| 162 | -.683543 | -.667378 | -.649192 | -.629052 | -.607031 | -.583205 |
| 164 | -.678576 | -.656067 | -.631553 | -.605121 | -.576864 | -.546882 |
| 166 | -.661127 | -.631717 | -.600361 | -.567172 | -.532267 | -.495767 |
| 168 | -.629391 | -.592431 | -.553642 | -.513161 | -.471133 | -.427704 |
| 170 | -.580700 | -.535377 | -.488408 | -.439961 | -.390210 | -.339331 |
| 172 | -.510643 | -.455823 | -.399630 | -.342267 | -.283941 | -.224861 |
| 174 | -.410868 | -.344762 | -.277682 | -.209873 | -.141583 | -.073059 |
| 176 | -.262247 | -.181490 | -.100371 | -.019190 | .061754 | .142165 |
| 178 | -.002440 | .101553 | .204817 | .306964 | .407613 | .506387 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$P_\nu(\cos \theta)$$

| ν | 3.30 | 3.32 | 3.34 | 3.36 | 3.38 | 3.40 |
|---|---|---|---|---|---|---|
| θ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .995681 | .995635 | .995589 | .995542 | .995495 | .995447 |
| 4 | .982780 | .982596 | .982412 | .982225 | .982038 | .981851 |
| 6 | .961456 | .961046 | .960634 | .960220 | .959804 | .959386 |
| 8 | .931971 | .931253 | .930532 | .929807 | .929079 | .928347 |
| 10 | .894688 | .893589 | .892483 | .891373 | .890258 | .889137 |
| 12 | .850068 | .848521 | .846968 | .845408 | .843841 | .842267 |
| 14 | .798658 | .796612 | .794558 | .792495 | .790425 | .788346 |
| 16 | .741089 | .738505 | .735911 | .733307 | .730694 | .728072 |
| 18 | .678068 | .674920 | .671762 | .668593 | .665414 | .662226 |
| 20 | .610363 | .606642 | .602911 | .599169 | .595417 | .591656 |
| 22 | .538801 | .534513 | .530216 | .525910 | .521595 | .517272 |
| 24 | .464250 | .459419 | .454580 | .449735 | .444883 | .440025 |
| 26 | .387613 | .382277 | .376938 | .371596 | .366250 | .360902 |
| 28 | .309812 | .304028 | .298245 | .292463 | .286684 | .280906 |
| 30 | .231780 | .225618 | .219463 | .213316 | .207178 | .201048 |
| 32 | .154444 | .147990 | .141550 | .135126 | .128718 | .122327 |
| 34 | .078720 | .072070 | .065445 | .058844 | .052269 | .045720 |
| 36 | .005493 | -.001242 | -.007943 | -.014609 | -.021238 | -.027830 |
| 38 | -.064387 | -.071092 | -.077749 | -.084359 | -.090921 | -.097433 |
| 40 | -.130125 | -.136673 | -.143161 | -.149588 | -.155954 | -.162257 |
| 42 | -.190981 | -.197243 | -.203432 | -.209545 | -.215583 | -.221543 |
| 44 | -.246285 | -.252131 | -.257888 | -.263556 | -.269132 | -.274617 |
| 46 | -.295447 | -.300747 | -.305941 | -.311032 | -.316016 | -.320895 |
| 48 | -.337961 | -.342587 | -.347093 | -.351480 | -.355746 | -.359892 |
| 50 | -.373412 | -.377244 | -.380942 | -.384506 | -.387936 | -.391231 |
| 52 | -.401484 | -.404411 | -.407191 | -.409823 | -.412308 | -.414646 |
| 54 | -.421960 | -.423882 | -.425646 | -.427250 | -.428696 | -.429983 |
| 56 | -.434727 | -.435560 | -.436224 | -.436719 | -.437046 | -.437206 |
| 58 | -.439776 | -.439451 | -.438950 | -.438272 | -.437420 | -.436394 |
| 60 | -.437204 | -.435671 | -.433957 | -.432062 | -.429990 | -.427740 |
| 62 | -.427209 | -.424438 | -.421485 | -.418351 | -.415039 | -.411551 |
| 64 | -.410087 | -.406071 | -.401875 | -.397502 | -.392954 | -.388235 |
| 66 | -.386233 | -.380987 | -.375568 | -.369979 | -.364223 | -.358305 |
| 68 | -.356128 | -.349691 | -.343092 | -.336335 | -.329424 | -.322365 |
| 70 | -.320338 | -.312773 | -.305061 | -.297208 | -.289220 | -.281100 |
| 72 | -.279504 | -.270896 | -.262163 | -.253311 | -.244345 | -.235272 |
| 74 | -.234330 | -.224790 | -.215151 | -.205418 | -.195600 | -.185702 |
| 76 | -.185580 | -.175240 | -.164830 | -.154359 | -.143834 | -.133262 |
| 78 | -.134061 | -.123073 | -.112051 | -.101003 | -.089937 | -.078861 |
| 80 | -.080618 | -.069152 | -.057692 | -.046247 | -.034824 | -.023431 |
| 82 | -.026114 | -.014359 | -.002653 | .008994 | .020576 | .032082 |
| 84 | .028572 | .040415 | .052163 | .063806 | .075335 | .086741 |
| 86 | .082566 | .094285 | .105860 | .117281 | .128539 | .139625 |
| 88 | .135004 | .146380 | .157561 | .168537 | .179300 | .189840 |
| 90 | .185049 | .195859 | .206422 | .216729 | .226771 | .236541 |

$$P_\nu(\cos\theta)$$

| $\nu$ | 3.30 | 3.32 | 3.34 | 3.36 | 3.38 | 3.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .185049 | .195859 | .206422 | .216729 | .226772 | .236541 |
| 92 | .231898 | .241919 | .251641 | .261057 | .270157 | .278936 |
| 94 | .274797 | .283010 | .292474 | .300782 | .308726 | .316301 |
| 96 | .313050 | .320844 | .328241 | .335235 | .341821 | .347993 |
| 98 | .346027 | .352403 | .358339 | .363828 | .368868 | .373454 |
| 100 | .373176 | .377952 | .382248 | .386060 | .389386 | .392226 |
| 102 | .394029 | .397042 | .399540 | .401525 | .402995 | .403951 |
| 104 | .408208 | .409318 | .409888 | .409920 | .409417 | .408382 |
| 106 | .415430 | .414526 | .413064 | .411050 | .408488 | .405385 |
| 108 | .415515 | .412515 | .408949 | .404825 | .400153 | .394942 |
| 110 | .408385 | .403239 | .397531 | .391272 | .384474 | .377148 |
| 112 | .394066 | .386762 | .378911 | .370526 | .361622 | .352217 |
| 114 | .372690 | .363252 | .353294 | .342832 | .331886 | .320474 |
| 116 | .344492 | .332984 | .320994 | .308544 | .295657 | .282354 |
| 118 | .309810 | .296334 | .282429 | .268120 | .253433 | .238395 |
| 120 | .269078 | .253776 | .238112 | .222113 | .205810 | .189231 |
| 122 | .222822 | .205877 | .188649 | .171170 | .153471 | .135586 |
| 124 | .171655 | .153288 | .134730 | .116017 | .097182 | .078262 |
| 126 | .116269 | .096738 | .077122 | .057456 | .037780 | .018130 |
| 128 | .057426 | .037025 | .016654 | -.003646 | -.023837 | -.043881 |
| 130 | -.004049 | -.024994 | -.045782 | -.066373 | -.086724 | -.106798 |
| 132 | -.067282 | -.088416 | -.109257 | -.129764 | -.149896 | -.169613 |
| 134 | -.131356 | -.152296 | -.172802 | -.192831 | -.212342 | -.231297 |
| 136 | -.195319 | -.215664 | -.235425 | -.254563 | -.273039 | -.290814 |
| 138 | -.258203 | -.277531 | -.296126 | -.313948 | -.330961 | -.347131 |
| 140 | -.319027 | -.336905 | -.353899 | -.369973 | -.385094 | -.399231 |
| 142 | -.376809 | -.392797 | -.407752 | -.421643 | -.434441 | -.446122 |
| 144 | -.430577 | -.444232 | -.456709 | -.467986 | -.478039 | -.486849 |
| 146 | -.479374 | -.490253 | -.499822 | -.508062 | -.514958 | -.520499 |
| 148 | -.522264 | -.529936 | -.536173 | -.540968 | -.544314 | -.546210 |
| 150 | -.558341 | -.562383 | -.564883 | -.565843 | -.565268 | -.563166 |
| 152 | -.586724 | -.586729 | -.585105 | -.581865 | -.577025 | -.570606 |
| 154 | -.606555 | -.602138 | -.596026 | -.588247 | -.578829 | -.567807 |
| 156 | -.616992 | -.607786 | -.596849 | -.584221 | -.569947 | -.554075 |
| 158 | -.617186 | -.602849 | -.586776 | -.569021 | -.549647 | -.528717 |
| 160 | -.606250 | -.586461 | -.564965 | -.541837 | -.517154 | -.490999 |
| 162 | -.583205 | -.557657 | -.530476 | -.501754 | -.471587 | -.440077 |
| 164 | -.546882 | -.515279 | -.482163 | -.447646 | -.411847 | -.374885 |
| 166 | -.495767 | -.457801 | -.418499 | -.377995 | -.336428 | -.293940 |
| 168 | -.427704 | -.383028 | -.337260 | -.290558 | -.243083 | -.194998 |
| 170 | -.339331 | -.287504 | -.234911 | -.181736 | -.128164 | -.074382 |
| 172 | -.224861 | -.165237 | -.105282 | -.045208 | .014771 | .074448 |
| 174 | -.073059 | -.004548 | .063700 | .131445 | .198442 | .264454 |
| 176 | .142165 | .221748 | .300212 | .377272 | .452650 | .526074 |
| 178 | .506387 | .602921 | .696856 | .787847 | .875559 | .959670 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$P_\nu(\cos \theta)$$

| $\nu$ | 3.40 | 3.42 | 3.44 | 3.46 | 3.48 | 3.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 | 1.000000 |
| 2 | .995447 | .995400 | .995352 | .995304 | .995256 | .995208 |
| 4 | .981851 | .981662 | .981472 | .981281 | .981089 | .980897 |
| 6 | .959386 | .958966 | .958543 | .958119 | .957693 | .957265 |
| 8 | .928347 | .927611 | .926873 | .926130 | .925385 | .924636 |
| 10 | .889137 | .888012 | .886881 | .885745 | .884605 | .883459 |
| 12 | .842267 | .840687 | .839100 | .837506 | .835906 | .834299 |
| 14 | .788346 | .786259 | .784164 | .782060 | .779949 | .777830 |
| 16 | .728072 | .725441 | .722800 | .720150 | .717491 | .714823 |
| 18 | .662226 | .659027 | .655819 | .652602 | .649375 | .646138 |
| 20 | .591656 | .587886 | .584105 | .580316 | .576517 | .572709 |
| 22 | .517272 | .512940 | .508600 | .504252 | .499896 | .495532 |
| 24 | .440025 | .435161 | .430291 | .425415 | .420534 | .415648 |
| 26 | .360902 | .355551 | .350198 | .344843 | .339487 | .334130 |
| 28 | .280906 | .275131 | .269359 | .263591 | .257826 | .252065 |
| | | | | | | |
| 30 | .201048 | .194927 | .188816 | .182715 | .176624 | .170544 |
| 32 | .122327 | .115952 | .109596 | .103258 | .096938 | .090638 |
| 34 | .045720 | .039198 | .032703 | .026236 | .019797 | .013388 |
| 36 | -.027830 | -.034384 | -.040900 | -.047378 | -.053815 | -.060212 |
| 38 | -.097433 | -.103895 | -.110306 | -.116667 | -.122975 | -.129230 |
| 40 | -.162257 | -.168496 | -.174672 | -.180782 | -.186828 | -.192807 |
| 42 | -.221543 | -.227426 | -.233232 | -.238958 | -.244605 | -.250172 |
| 44 | -.274617 | -.280010 | -.285311 | -.290518 | -.295631 | -.300650 |
| 46 | -.320895 | -.325666 | -.330331 | -.334887 | -.339335 | -.343675 |
| 48 | -.359892 | -.363917 | -.367820 | -.371600 | -.375259 | -.378795 |
| 50 | -.391231 | -.394392 | -.397417 | -.400307 | -.403062 | -.405681 |
| 52 | -.414646 | -.416836 | -.418880 | -.420776 | -.422525 | -.424127 |
| 54 | -.429983 | -.431112 | -.432084 | -.432898 | -.433556 | -.434058 |
| 56 | -.437206 | -.437199 | -.437027 | -.436690 | -.436189 | -.435525 |
| 58 | -.436394 | -.435196 | -.433827 | -.432288 | -.430582 | -.428708 |
| | | | | | | |
| 60 | -.427740 | -.425317 | -.422720 | -.419952 | -.417015 | -.413912 |
| 62 | -.411551 | -.407889 | -.404056 | -.400055 | -.395887 | -.391557 |
| 64 | -.388235 | -.383348 | -.378295 | -.373080 | -.367707 | -.362178 |
| 66 | -.358305 | -.352229 | -.345997 | -.339615 | -.333085 | -.326413 |
| 68 | -.322365 | -.315161 | -.307817 | -.300338 | -.292728 | -.284992 |
| 70 | -.281100 | -.272855 | -.264491 | -.256011 | -.247422 | -.238729 |
| 72 | -.235272 | -.226097 | -.216827 | -.207467 | -.198024 | -.188503 |
| 74 | -.185702 | -.175731 | -.165693 | -.155597 | -.145447 | -.135252 |
| 76 | -.133262 | -.122650 | -.112005 | -.101336 | -.090649 | -.079952 |
| 78 | -.078861 | -.067782 | -.056710 | -.045651 | -.034614 | -.023606 |
| 80 | -.023431 | -.012079 | -.000774 | .010475 | .021660 | .032773 |
| 82 | .032082 | .043504 | .054833 | .066061 | .077180 | .088181 |
| 84 | .086741 | .098017 | .109152 | .120138 | .130968 | .141632 |
| 86 | .139625 | .150530 | .161246 | .171765 | .182078 | .192178 |
| 88 | .189840 | .200150 | .210221 | .220045 | .229614 | .238922 |
| | | | | | | |
| 90 | .236541 | .246030 | .255231 | .264137 | .272740 | .281033 |

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$$P_\nu(\cos\theta)$$

| $\nu$ | 3.40 | 3.42 | 3.44 | 3.46 | 3.48 | 3.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .236541 | .246031 | .255232 | .264137 | .272740 | .281034 |
| 92 | .278936 | .287385 | .295498 | .303269 | .310691 | .317759 |
| 94 | .316301 | .323501 | .330319 | .336751 | .342791 | .348436 |
| 96 | .347993 | .353747 | .359078 | .363983 | .368459 | .372502 |
| 98 | .373454 | .377585 | .381257 | .384468 | .387218 | .389505 |
| 100 | .392226 | .394578 | .396441 | .397817 | .398706 | .399109 |
| 102 | .403951 | .404395 | .404329 | .403756 | .402678 | .401099 |
| 104 | .408382 | .406819 | .404733 | .402129 | .399012 | .395390 |
| 106 | .405385 | .401749 | .397585 | .392903 | .387711 | .382019 |
| 108 | .394942 | .389200 | .382939 | .376170 | .368905 | .361156 |
| 110 | .377148 | .369308 | .360968 | .352143 | .342846 | .333095 |
| 112 | .352217 | .342325 | .331965 | .321153 | .309908 | .298250 |
| 114 | .320474 | .308617 | .296335 | .283650 | .270582 | .257154 |
| 116 | .282354 | .268659 | .254597 | .240191 | .225466 | .210447 |
| 118 | .238395 | .223031 | .207369 | .191436 | .175260 | .158869 |
| | | | | | | |
| 120 | .189231 | .172406 | .155366 | .138140 | .120758 | .103252 |
| 122 | .135586 | .117547 | .099386 | .081137 | .062832 | .044504 |
| 124 | .078262 | .059291 | .040304 | .021337 | .002423 | -.016402 |
| 126 | .018130 | -.001456 | -.020943 | -.040293 | -.059472 | -.078443 |
| 128 | -.043881 | -.063738 | -.083371 | -.102742 | -.121815 | -.140555 |
| 130 | -.106798 | -.126554 | -.145954 | -.164962 | -.183540 | -.201654 |
| 132 | -.169613 | -.188875 | -.207646 | -.225889 | -.243567 | -.260649 |
| 134 | -.231297 | -.249657 | -.267387 | -.284452 | -.300817 | -.316452 |
| 136 | -.290814 | -.307853 | -.324123 | -.339590 | -.354226 | -.368001 |
| 138 | -.347131 | -.362425 | -.376813 | -.390265 | -.402757 | -.414265 |
| 140 | -.399231 | -.412356 | -.424444 | -.435471 | -.445416 | -.454262 |
| 142 | -.446122 | -.456662 | -.466043 | -.474246 | -.481258 | -.487067 |
| 144 | -.486849 | -.494401 | -.500683 | -.505684 | -.509399 | -.511824 |
| 146 | -.520499 | -.524679 | -.527493 | -.528939 | -.529022 | -.527747 |
| 148 | -.546210 | -.546657 | -.545662 | -.543233 | -.539385 | -.534133 |
| | | | | | | |
| 150 | -.563166 | -.559551 | -.554440 | -.547852 | -.539814 | -.530352 |
| 152 | -.570606 | -.562634 | -.553137 | -.542148 | -.529706 | -.515852 |
| 154 | -.567807 | -.555221 | -.541111 | -.525527 | -.508519 | -.490140 |
| 156 | -.554075 | -.536660 | -.517758 | -.497432 | -.475747 | -.452772 |
| 158 | -.528717 | -.506302 | -.482475 | -.457313 | -.430898 | -.403314 |
| 160 | -.490999 | -.463458 | -.434622 | -.404585 | -.373444 | -.341299 |
| 162 | -.440077 | -.407328 | -.373448 | -.338549 | -.302744 | -.266149 |
| 164 | -.374885 | -.336884 | -.297970 | -.258273 | -.217922 | -.177051 |
| 166 | -.293940 | -.250674 | -.206774 | -.162388 | -.117665 | -.072751 |
| 168 | -.194998 | -.146467 | -.097655 | -.048728 | .000148 | .048812 |
| 170 | -.074382 | -.020575 | .033071 | .086373 | .139149 | .191219 |
| 172 | .074448 | .133612 | .192058 | .249581 | .305984 | .361073 |
| 174 | .264454 | .329246 | .392591 | .454264 | .514050 | .571741 |
| 176 | .526074 | .597278 | .666011 | .732026 | .795089 | .854979 |
| 178 | .959670 | 1.039874 | 1.115882 | 1.187417 | 1.254224 | 1.316066 |
| | | | | | | |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

## TABLE II

Table of $Q_\nu(\cos \theta)$:  Six Decimal Places

$$\theta = 2° \ (2°) \ 178°$$

$$\nu = -0.5 \ (0.02) \ 3.5$$

$$Q_\nu(\cos\theta)$$

| $\nu$ | $-.50$ | $-.48$ | $-.46$ | $-.44$ | $-.42$ | $-.40$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 5.434909 | 5.339446 | 5.250000 | 5.165951 | 5.086762 | 5.011968 |
| 4 | 4.742716 | 4.647230 | 4.557757 | 4.473680 | 4.394460 | 4.319632 |
| 6 | 4.338653 | 4.243127 | 4.153612 | 4.069488 | 3.990218 | 3.915338 |
| 8 | 4.052757 | 3.957176 | 3.867602 | 3.783414 | 3.704077 | 3.629125 |
| 10 | 3.831741 | 3.736089 | 3.646440 | 3.562172 | 3.482750 | 3.407708 |
| 12 | 3.651855 | 3.556117 | 3.466376 | 3.382012 | 3.302488 | 3.227338 |
| 14 | 3.500422 | 3.404582 | 3.314734 | 3.230256 | 3.150612 | 3.075338 |
| 16 | 3.369867 | 3.273911 | 3.183939 | 3.099331 | 3.019551 | 2.944135 |
| 18 | 3.255302 | 3.159213 | 3.069102 | 2.984348 | 2.904415 | 2.828840 |
| 20 | 3.153384 | 3.057147 | 2.966880 | 2.881963 | 2.801862 | 2.726111 |
| 22 | 3.061728 | 2.965327 | 2.874888 | 2.789792 | 2.709505 | 2.633561 |
| 24 | 2.978568 | 2.881987 | 2.791360 | 2.706069 | 2.625579 | 2.549426 |
| 26 | 2.902564 | 2.805787 | 2.714956 | 2.629453 | 2.548744 | 2.472365 |
| 28 | 2.832671 | 2.735682 | 2.644630 | 2.558899 | 2.477955 | 2.401332 |
| 30 | 2.768062 | 2.670844 | 2.579555 | 2.493579 | 2.412382 | 2.335500 |
| 32 | 2.708066 | 2.610602 | 2.519060 | 2.432823 | 2.351356 | 2.274198 |
| 34 | 2.652137 | 2.554411 | 2.462598 | 2.376081 | 2.294329 | 2.216877 |
| 36 | 2.599818 | 2.501813 | 2.409712 | 2.322901 | 2.240845 | 2.163083 |
| 38 | 2.550730 | 2.452428 | 2.360023 | 2.272897 | 2.190520 | 2.112431 |
| 40 | 2.504549 | 2.405933 | 2.313205 | 2.225749 | 2.143034 | 2.064599 |
| 42 | 2.460998 | 2.362051 | 2.268982 | 2.181178 | 2.098107 | 2.019310 |
| 44 | 2.419840 | 2.320543 | 2.227116 | 2.138946 | 2.055501 | 1.976323 |
| 46 | 2.380869 | 2.281204 | 2.187400 | 2.098844 | 2.015008 | 1.935430 |
| 48 | 2.343904 | 2.243851 | 2.149652 | 2.060693 | 1.976446 | 1.896451 |
| 50 | 2.308785 | 2.208327 | 2.113713 | 2.024332 | 1.939655 | 1.859225 |
| 52 | 2.275375 | 2.174491 | 2.079443 | 1.989620 | 1.904495 | 1.823610 |
| 54 | 2.243548 | 2.142218 | 2.046717 | 1.956432 | 1.870839 | 1.789480 |
| 56 | 2.213193 | 2.111398 | 2.015422 | 1.924656 | 1.838574 | 1.756722 |
| 58 | 2.184211 | 2.081929 | 1.985459 | 1.894191 | 1.807600 | 1.725234 |
| 60 | 2.156514 | 2.053724 | 1.956737 | 1.864946 | 1.777826 | 1.694925 |
| 62 | 2.130020 | 2.026700 | 1.929175 | 1.836839 | 1.749169 | 1.665712 |
| 64 | 2.104656 | 2.000784 | 1.902699 | 1.809796 | 1.721553 | 1.637519 |
| 66 | 2.080356 | 1.975909 | 1.877241 | 1.783748 | 1.694910 | 1.610278 |
| 68 | 2.057061 | 1.952014 | 1.852739 | 1.758634 | 1.669178 | 1.583923 |
| 70 | 2.034714 | 1.929044 | 1.829139 | 1.734396 | 1.644299 | 1.558398 |
| 72 | 2.013265 | 1.906947 | 1.806386 | 1.710982 | 1.620218 | 1.533649 |
| 74 | 1.992668 | 1.885676 | 1.784433 | 1.688342 | 1.596888 | 1.509624 |
| 76 | 1.972881 | 1.865187 | 1.763237 | 1.666433 | 1.574262 | 1.486279 |
| 78 | 1.953863 | 1.845442 | 1.742757 | 1.645212 | 1.552297 | 1.463568 |
| 80 | 1.935579 | 1.826401 | 1.722953 | 1.624640 | 1.530954 | 1.441452 |
| 82 | 1.917996 | 1.808032 | 1.703791 | 1.604681 | 1.510195 | 1.419892 |
| 84 | 1.901081 | 1.790300 | 1.685237 | 1.585300 | 1.489985 | 1.398852 |
| 86 | 1.884807 | 1.773177 | 1.667260 | 1.566466 | 1.470290 | 1.378298 |
| 88 | 1.869146 | 1.756635 | 1.649831 | 1.548147 | 1.451079 | 1.358196 |
| 90 | 1.854073 | 1.740647 | 1.632923 | 1.530315 | 1.432323 | 1.338515 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | $-.50$ | $-.48$ | $-.46$ | $-.44$ | $-.42$ | $-.40$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.854073 | 1.740648 | 1.632923 | 1.530315 | 1.432323 | 1.338515 |
| 92 | 1.839565 | 1.725189 | 1.616509 | 1.512943 | 1.413992 | 1.319227 |
| 94 | 1.825600 | 1.710237 | 1.600565 | 1.496005 | 1.396058 | 1.300301 |
| 96 | 1.812158 | 1.695770 | 1.585067 | 1.479474 | 1.378496 | 1.281710 |
| 98 | 1.799220 | 1.681766 | 1.569993 | 1.463328 | 1.361279 | 1.263425 |
| 100 | 1.786767 | 1.668205 | 1.555321 | 1.447543 | 1.344382 | 1.245421 |
| 102 | 1.774784 | 1.655071 | 1.541031 | 1.432096 | 1.327782 | 1.227672 |
| 104 | 1.763255 | 1.642343 | 1.527102 | 1.416966 | 1.311453 | 1.210150 |
| 106 | 1.752164 | 1.630007 | 1.513516 | 1.402132 | 1.295372 | 1.192831 |
| 108 | 1.741498 | 1.618044 | 1.500254 | 1.387570 | 1.279517 | 1.175688 |
| 110 | 1.731244 | 1.606440 | 1.487298 | 1.373263 | 1.263863 | 1.158696 |
| 112 | 1.721389 | 1.595179 | 1.474628 | 1.359187 | 1.248385 | 1.141827 |
| 114 | 1.711923 | 1.584247 | 1.462229 | 1.345322 | 1.233062 | 1.125055 |
| 116 | 1.702835 | 1.573629 | 1.450081 | 1.331647 | 1.217867 | 1.108352 |
| 118 | 1.694113 | 1.563312 | 1.438167 | 1.318140 | 1.202776 | 1.091689 |
| 120 | 1.685749 | 1.553282 | 1.426470 | 1.304780 | 1.187762 | 1.075036 |
| 122 | 1.677734 | 1.543524 | 1.414970 | 1.291544 | 1.172799 | 1.058361 |
| 124 | 1.670058 | 1.534027 | 1.403650 | 1.278408 | 1.157858 | 1.041632 |
| 126 | 1.662715 | 1.524774 | 1.392490 | 1.265347 | 1.142908 | 1.024812 |
| 128 | 1.655696 | 1.515754 | 1.381471 | 1.252335 | 1.127919 | 1.007864 |
| 130 | 1.648994 | 1.506952 | 1.370570 | 1.239345 | 1.112854 | .990745 |
| 132 | 1.642603 | 1.498353 | 1.359767 | 1.226346 | 1.097676 | .973412 |
| 134 | 1.636517 | 1.489943 | 1.349037 | 1.213306 | 1.082345 | .955814 |
| 136 | 1.630728 | 1.481705 | 1.338353 | 1.200190 | 1.066814 | .937897 |
| 138 | 1.625233 | 1.473624 | 1.327690 | 1.186957 | 1.051034 | .919599 |
| 140 | 1.620025 | 1.465679 | 1.317014 | 1.173565 | 1.034948 | .900852 |
| 142 | 1.615100 | 1.457852 | 1.306292 | 1.159963 | 1.018492 | .881578 |
| 144 | 1.610453 | 1.450122 | 1.295484 | 1.146095 | 1.001593 | .861685 |
| 146 | 1.606080 | 1.442462 | 1.284545 | 1.131897 | .984166 | .841071 |
| 148 | 1.601978 | 1.434845 | 1.273425 | 1.117294 | .966113 | .819614 |
| 150 | 1.598141 | 1.427240 | 1.262061 | 1.102195 | .947317 | .797169 |
| 152 | 1.594567 | 1.419608 | 1.250382 | 1.086496 | .927637 | .773564 |
| 154 | 1.591254 | 1.411904 | 1.238301 | 1.070067 | .906905 | .748589 |
| 156 | 1.588197 | 1.404073 | 1.225712 | 1.052751 | .884913 | .721985 |
| 158 | 1.585394 | 1.396047 | 1.212480 | 1.034350 | .861396 | .693427 |
| 160 | 1.582842 | 1.387740 | 1.198435 | 1.014609 | .836020 | .662499 |
| 162 | 1.580541 | 1.379037 | 1.183355 | .993196 | .808344 | .628652 |
| 164 | 1.578486 | 1.369788 | 1.166937 | .969661 | .777772 | .591149 |
| 166 | 1.576678 | 1.359781 | 1.148761 | .943377 | .743472 | .548954 |
| 168 | 1.575113 | 1.348708 | 1.128213 | .913427 | .704225 | .500555 |
| 170 | 1.573792 | 1.336090 | 1.104342 | .878388 | .658149 | .443611 |
| 172 | 1.572712 | 1.321132 | 1.075559 | .835887 | .602088 | .374204 |
| 174 | 1.571873 | 1.302342 | 1.038886 | .781470 | .530136 | .284993 |
| 176 | 1.571275 | 1.276371 | .987643 | .705152 | .429040 | .159513 |
| 178 | 1.570916 | 1.232549 | .900528 | .575086 | .256533 | -.054758 |
| 180 | 1.570796 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | -.40 | -.38 | -.36 | -.34 | -.32 | -.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 5.011968 | 4.941162 | 4.873988 | 4.810132 | 4.749317 | 4.691297 |
| 4 | 4.319632 | 4.248790 | 4.181578 | 4.117682 | 4.056825 | 3.998760 |
| 6 | 3.915338 | 3.844440 | 3.777168 | 3.713210 | 3.652287 | 3.594153 |
| 8 | 3.629125 | 3.558152 | 3.490801 | 3.426758 | 3.365748 | 3.307523 |
| 10 | 3.407708 | 3.336640 | 3.269190 | 3.205045 | 3.143927 | 3.085590 |
| 12 | 3.227338 | 3.156158 | 3.088590 | 3.024323 | 2.963078 | 2.904610 |
| 14 | 3.075338 | 3.004027 | 2.936324 | 2.871916 | 2.810525 | 2.751906 |
| 16 | 2.944135 | 2.872677 | 2.804820 | 2.740253 | 2.678698 | 2.619909 |
| 18 | 2.828840 | 2.757216 | 2.689189 | 2.624445 | 2.562708 | 2.503731 |
| 20 | 2.726111 | 2.654305 | 2.586090 | 2.521151 | 2.459214 | 2.400032 |
| 22 | 2.633561 | 2.561556 | 2.493135 | 2.427985 | 2.365831 | 2.306427 |
| 24 | 2.549426 | 2.477205 | 2.408562 | 2.343184 | 2.280796 | 2.221152 |
| 26 | 2.472365 | 2.399911 | 2.331029 | 2.265406 | 2.202766 | 2.142865 |
| 28 | 2.401332 | 2.328629 | 2.259491 | 2.193606 | 2.130698 | 2.070524 |
| 30 | 2.335500 | 2.262531 | 2.193119 | 2.126955 | 2.063763 | 2.003299 |
| 32 | 2.274198 | 2.200945 | 2.131244 | 2.064784 | 2.001291 | 1.940520 |
| 34 | 2.216877 | 2.143324 | 2.073317 | 2.006545 | 1.942733 | 1.881639 |
| 36 | 2.163083 | 2.089213 | 2.018882 | 1.951780 | 1.887633 | 1.826200 |
| 38 | 2.112431 | 2.038227 | 1.967555 | 1.900107 | 1.835610 | 1.773820 |
| 40 | 2.064599 | 1.990043 | 1.919014 | 1.851203 | 1.786338 | 1.724175 |
| 42 | 2.019310 | 1.944384 | 1.872980 | 1.804789 | 1.739538 | 1.676986 |
| 44 | 1.976323 | 1.901010 | 1.829214 | 1.760625 | 1.694973 | 1.632015 |
| 46 | 1.935430 | 1.859714 | 1.787507 | 1.718504 | 1.652431 | 1.589051 |
| 48 | 1.896451 | 1.820312 | 1.747677 | 1.678241 | 1.611732 | 1.547912 |
| 50 | 1.859225 | 1.782644 | 1.709563 | 1.639677 | 1.572714 | 1.508437 |
| 52 | 1.823610 | 1.746569 | 1.673024 | 1.602668 | 1.535234 | 1.470482 |
| 54 | 1.789480 | 1.711960 | 1.637931 | 1.567088 | 1.499164 | 1.433920 |
| 56 | 1.756722 | 1.678703 | 1.604171 | 1.532823 | 1.464390 | 1.398637 |
| 58 | 1.725234 | 1.646697 | 1.571643 | 1.499770 | 1.430810 | 1.364529 |
| 60 | 1.694925 | 1.615849 | 1.540253 | 1.467835 | 1.398330 | 1.331502 |
| 62 | 1.665712 | 1.586077 | 1.509918 | 1.436936 | 1.366865 | 1.299472 |
| 64 | 1.637519 | 1.557303 | 1.480561 | 1.406995 | 1.336339 | 1.268361 |
| 66 | 1.610278 | 1.529459 | 1.452113 | 1.377941 | 1.306679 | 1.238097 |
| 68 | 1.583923 | 1.502480 | 1.424507 | 1.349708 | 1.277821 | 1.208615 |
| 70 | 1.558398 | 1.476307 | 1.397686 | 1.322238 | 1.249704 | 1.179852 |
| 72 | 1.533649 | 1.450886 | 1.371593 | 1.295474 | 1.222271 | 1.151754 |
| 74 | 1.509624 | 1.426167 | 1.346178 | 1.269365 | 1.195470 | 1.124265 |
| 76 | 1.486279 | 1.402100 | 1.321392 | 1.243861 | 1.169251 | 1.097336 |
| 78 | 1.463568 | 1.378644 | 1.297190 | 1.218917 | 1.143568 | 1.070920 |
| 80 | 1.441452 | 1.355755 | 1.273530 | 1.194489 | 1.118378 | 1.044973 |
| 82 | 1.419892 | 1.333395 | 1.250372 | 1.170537 | 1.093637 | 1.019452 |
| 84 | 1.398852 | 1.311526 | 1.227678 | 1.147022 | 1.069307 | .994315 |
| 86 | 1.378298 | 1.290113 | 1.205410 | 1.123905 | 1.045349 | .969525 |
| 88 | 1.358196 | 1.269123 | 1.183536 | 1.101153 | 1.021727 | .945043 |
| 90 | 1.338515 | 1.248522 | 1.162020 | 1.078728 | .998404 | .920833 |

$$Q_\nu(\cos \theta)$$

| $\nu$ | $-.40$ | $-.38$ | $-.36$ | $-.34$ | $-.32$ | $-.30$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | 1.338515 | 1.248522 | 1.162020 | 1.078728 | .998404 | .920833 |
| 92 | 1.319227 | 1.228280 | 1.140830 | 1.056599 | .975347 | .896858 |
| 94 | 1.300301 | 1.208366 | 1.119935 | 1.034733 | .952519 | .873085 |
| 96 | 1.281710 | 1.188751 | 1.099304 | 1.013096 | .929889 | .849476 |
| 98 | 1.263425 | 1.169405 | 1.078906 | .991657 | .907423 | .825999 |
| 100 | 1.245421 | 1.150301 | 1.058711 | .970384 | .885087 | .802617 |
| 102 | 1.227672 | 1.131410 | 1.038690 | .949246 | .862849 | .779298 |
| 104 | 1.210150 | 1.112705 | 1.018813 | .928212 | .840675 | .756005 |
| 106 | 1.192831 | 1.094157 | .999049 | .907248 | .818531 | .732703 |
| 108 | 1.175688 | 1.075738 | .979368 | .886323 | .796382 | .709355 |
| 110 | 1.158696 | 1.057420 | .959739 | .865403 | .774193 | .685922 |
| 112 | 1.141827 | 1.039172 | .940130 | .844453 | .751926 | .662367 |
| 114 | 1.125055 | 1.020966 | .920509 | .823438 | .729545 | .638648 |
| 116 | 1.108352 | 1.002771 | .900841 | .802322 | .707007 | .614722 |
| 118 | 1.091689 | .984553 | .881090 | .781063 | .684272 | .590544 |
| | | | | | | |
| 120 | 1.075036 | .966279 | .861218 | .759622 | .661293 | .566065 |
| 122 | 1.058361 | .947913 | .841186 | .737954 | .638024 | .541234 |
| 124 | 1.041632 | .929417 | .820952 | .716012 | .614413 | .515995 |
| 126 | 1.024812 | .910751 | .800467 | .693745 | .590403 | .490289 |
| 128 | 1.007864 | .891869 | .779685 | .671099 | .565935 | .464048 |
| 130 | .990745 | .872725 | .758549 | .648011 | .540943 | .437203 |
| 132 | .973412 | .853266 | .737001 | .624418 | .515353 | .409672 |
| 134 | .955814 | .833435 | .714975 | .600244 | .489084 | .381369 |
| 136 | .937897 | .813166 | .692398 | .575407 | .462046 | .352194 |
| 138 | .919599 | .792389 | .669186 | .549816 | .434137 | .322036 |
| 140 | .900852 | .771022 | .645249 | .523367 | .405242 | .290769 |
| 142 | .881578 | .748972 | .620479 | .495939 | .375228 | .258250 |
| 144 | .861685 | .726135 | .594754 | .467395 | .343943 | .224310 |
| 146 | .841071 | .702386 | .567934 | .437577 | .311210 | .188758 |
| 148 | .819614 | .677581 | .539851 | .406296 | .276823 | .151365 |
| | | | | | | |
| 150 | .797169 | .651550 | .510309 | .373330 | .240532 | .111861 |
| 152 | .773564 | .624088 | .479071 | .338412 | .202043 | .069922 |
| 154 | .748589 | .594945 | .445850 | .301217 | .160994 | .025151 |
| 156 | .721985 | .563813 | .410290 | .261344 | .116938 | $-.022939$ |
| 158 | .693427 | .530306 | .371944 | .218287 | .069315 | $-.074966$ |
| 160 | .662499 | .493928 | .330239 | .171398 | .017404 | $-.131719$ |
| 162 | .628652 | .454027 | .284422 | .119826 | $-.039740$ | $-.194235$ |
| 164 | .591149 | .409724 | .233476 | .062420 | $-.103400$ | $-.263918$ |
| 166 | .548954 | .359786 | .175977 | $-.002431$ | $-.175365$ | $-.342732$ |
| 168 | .500555 | .302412 | .109840 | $-.077084$ | $-.258257$ | $-.433552$ |
| 170 | .443611 | .234814 | .031843 | $-.165187$ | $-.356132$ | $-.540828$ |
| 172 | .374204 | .152325 | $-.063413$ | $-.272847$ | $-.475783$ | $-.672010$ |
| 174 | .284993 | .046200 | $-.186043$ | $-.411506$ | $-.629934$ | $-.841057$ |
| 176 | .159513 | $-.103175$ | $-.358731$ | $-.606833$ | $-.847136$ | $-1.079286$ |
| 178 | $-.054758$ | $-.358369$ | $-.653844$ | $-.940705$ | $-1.218456$ | $-1.486593$ |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | $-.30$ | $-.28$ | $-.26$ | $-.24$ | $-.22$ | $-.20$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .920833 | .845828 | .773223 | .702875 | .634655 | .568450 |
| 92 | .896858 | .820951 | .747461 | .676246 | .607180 | .540151 |
| 94 | .873085 | .796246 | .721843 | .649735 | .579798 | .511923 |
| 96 | .849476 | .771677 | .696332 | .623304 | .552471 | .483725 |
| 98 | .825999 | .747207 | .670891 | .596915 | .525159 | .455519 |
| 100 | .802617 | .722800 | .645482 | .570528 | .497822 | .427262 |
| 102 | .779298 | .698421 | .620068 | .544106 | .470422 | .398915 |
| 104 | .756005 | .674033 | .594610 | .517609 | .442916 | .370435 |
| 106 | .732703 | .649598 | .569071 | .490995 | .415262 | .341778 |
| 108 | .709355 | .625077 | .543408 | .464223 | .387418 | .312900 |
| 110 | .685922 | .600431 | .517580 | .437250 | .359337 | .283753 |
| 112 | .662367 | .575619 | .491545 | .410029 | .330973 | .254290 |
| 114 | .638648 | .550596 | .465255 | .382514 | .302275 | .224457 |
| 116 | .614722 | .525317 | .438663 | .354653 | .273192 | .194202 |
| 118 | .590544 | .499734 | .411719 | .326393 | .243666 | .163465 |
| | | | | | | |
| 120 | .566065 | .473796 | .384367 | .297676 | .213639 | .132184 |
| 122 | .541234 | .447447 | .356549 | .268442 | .183045 | .100292 |
| 124 | .515995 | .420629 | .328202 | .238623 | .151815 | .067717 |
| 126 | .490289 | .393275 | .299257 | .208146 | .119873 | .034378 |
| 128 | .464048 | .365316 | .269639 | .176934 | .087135 | .000189 |
| 130 | .437203 | .336675 | .239266 | .144898 | .053511 | -.034944 |
| 132 | .409672 | .307267 | .208047 | .111942 | .018897 | -.071131 |
| 134 | .381369 | .276995 | .175880 | .077959 | -.016817 | -.108487 |
| 136 | .352194 | .245754 | .142651 | .042827 | -.053761 | -.147146 |
| 138 | .322036 | .213424 | .108233 | .006411 | -.092077 | -.187259 |
| 140 | .290769 | .179869 | .072479 | -.031443 | -.131928 | -.228995 |
| 142 | .258250 | .144932 | .035223 | -.070914 | -.173502 | -.272551 |
| 144 | .224310 | .108434 | -.003728 | -.112206 | -.217014 | -.318153 |
| 146 | .188758 | .070166 | -.044599 | -.155558 | -.262716 | -.366066 |
| 148 | .151365 | .029881 | -.087655 | -.201251 | -.310904 | -.416599 |
| | | | | | | |
| 150 | .111861 | -.012714 | -.133207 | -.249618 | -.361930 | -.470122 |
| 152 | .069922 | -.057970 | -.181635 | -.301060 | -.416219 | -.527079 |
| 154 | .025151 | -.106316 | -.233397 | -.356067 | -.474287 | -.588014 |
| 156 | -.022939 | -.158282 | -.289063 | -.415243 | -.536773 | -.653595 |
| 158 | -.074966 | -.214535 | -.349348 | -.479351 | -.604482 | -.724668 |
| 160 | -.131719 | -.275930 | -.415171 | -.549370 | -.678447 | -.802317 |
| 162 | -.194235 | -.343594 | -.487740 | -.626583 | -.760027 | -.887968 |
| 164 | -.263918 | -.419047 | -.568688 | -.712731 | -.851058 | -.983549 |
| 166 | -.342732 | -.504420 | -.660302 | -.810247 | -.954114 | -1.091761 |
| 168 | -.433552 | -.602828 | -.765929 | -.922695 | -1.072959 | -1.216555 |
| 170 | -.540828 | -.719097 | -.890750 | -1.055592 | -1.213425 | -1.364055 |
| 172 | -.672010 | -.861307 | -1.043440 | -1.218175 | -1.385275 | -1.544509 |
| 174 | -.841057 | -1.044593 | -1.240254 | -1.427752 | -1.606801 | -1.777123 |
| 176 | -1.079286 | -1.302916 | -1.517662 | -1.723160 | -1.919053 | -2.104995 |
| 178 | -1.486593 | -1.744609 | -1.992004 | -2.228284 | -2.452973 | -2.665611 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | -.20 | -.18 | -.16 | -.14 | -.12 | -.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 4.436183 | 4.391037 | 4.347546 | 4.305602 | 4.265110 | 4.225980 |
| 4 | 3.743390 | 3.698187 | 3.654637 | 3.612632 | 3.572077 | 3.532881 |
| 6 | 3.338396 | 3.293106 | 3.249468 | 3.207371 | 3.166722 | 3.127430 |
| 8 | 3.051259 | 3.005858 | 2.962104 | 2.919890 | 2.879119 | 2.839702 |
| 10 | 2.828707 | 2.783171 | 2.739278 | 2.696921 | 2.656005 | 2.616439 |
| 12 | 2.647002 | 2.601309 | 2.557254 | 2.514733 | 2.473647 | 2.433909 |
| 14 | 2.493474 | 2.447603 | 2.403367 | 2.360659 | 2.319384 | 2.279452 |
| 16 | 2.360558 | 2.314489 | 2.270051 | 2.227138 | 2.185652 | 2.145507 |
| 18 | 2.243368 | 2.197082 | 2.152424 | 2.109286 | 2.067572 | 2.027194 |
| 20 | 2.138567 | 2.092047 | 2.047150 | 2.003770 | 1.961809 | 1.921181 |
| 22 | 2.043771 | 1.997000 | 1.951847 | 1.908207 | 1.865983 | 1.825088 |
| 24 | 1.957221 | 1.910182 | 1.864756 | 1.820840 | 1.778336 | 1.737157 |
| 26 | 1.877577 | 1.830252 | 1.784538 | 1.740329 | 1.697530 | 1.656052 |
| 28 | 1.803795 | 1.756169 | 1.710151 | 1.665634 | 1.622524 | 1.580733 |
| 30 | 1.735048 | 1.687107 | 1.640768 | 1.595929 | 1.552493 | 1.510374 |
| 32 | 1.670668 | 1.622395 | 1.575722 | 1.530545 | 1.486770 | 1.444309 |
| 34 | 1.610107 | 1.561487 | 1.514465 | 1.468937 | 1.424807 | 1.381991 |
| 36 | 1.552908 | 1.503927 | 1.456542 | 1.410648 | 1.366151 | 1.322966 |
| 38 | 1.498692 | 1.449334 | 1.401571 | 1.355298 | 1.310421 | 1.266855 |
| 40 | 1.447131 | 1.397384 | 1.349229 | 1.302563 | 1.257293 | 1.213333 |
| 42 | 1.397950 | 1.347798 | 1.299238 | 1.252166 | 1.206490 | 1.162124 |
| 44 | 1.350908 | 1.300337 | 1.251357 | 1.203866 | 1.157772 | 1.112989 |
| 46 | 1.305795 | 1.254792 | 1.205379 | 1.157456 | 1.110931 | 1.065719 |
| 48 | 1.262429 | 1.210979 | 1.161120 | 1.112753 | 1.065784 | 1.020132 |
| 50 | 1.220648 | 1.168737 | 1.118419 | 1.069593 | 1.022170 | .976066 |
| 52 | 1.180308 | 1.127922 | 1.077131 | 1.027836 | .979946 | .933379 |
| 54 | 1.141282 | 1.088406 | 1.037129 | .987350 | .938982 | .891941 |
| 56 | 1.103452 | 1.050073 | .998296 | .948023 | .899164 | .851638 |
| 58 | 1.066716 | 1.012819 | .960530 | .909748 | .860387 | .812366 |
| 60 | 1.030979 | .976550 | .923734 | .872431 | .822557 | .774030 |
| 62 | .996154 | .941179 | .887822 | .835986 | .785586 | .736543 |
| 64 | .962162 | .906626 | .852715 | .800333 | .749396 | .699825 |
| 66 | .928930 | .872818 | .818339 | .765399 | .713913 | .663804 |
| 68 | .896391 | .839688 | .784627 | .731115 | .679068 | .628411 |
| 70 | .864481 | .807171 | .751514 | .697418 | .644798 | .593581 |
| 72 | .833142 | .775210 | .718943 | .664248 | .611044 | .559257 |
| 74 | .802317 | .743748 | .686855 | .631549 | .577748 | .525381 |
| 76 | .771956 | .712733 | .655200 | .599268 | .544859 | .491899 |
| 78 | .742007 | .682113 | .623925 | .567354 | .512323 | .458762 |
| 80 | .712424 | .651843 | .592984 | .535760 | .480095 | .425919 |
| 82 | .683162 | .621875 | .562329 | .504437 | .448126 | .393325 |
| 84 | .654175 | .592166 | .531917 | .473343 | .416370 | .360934 |
| 86 | .625422 | .562672 | .501702 | .442431 | .384785 | .328700 |
| 88 | .596861 | .533351 | .471644 | .411659 | .353326 | .296581 |
| 90 | .568450 | .504161 | .441699 | .380985 | .321951 | .264534 |

$$Q_\nu(\cos \theta)$$

| $\nu$ | $-.20$ | $-.18$ | $-.16$ | $-.14$ | $-.12$ | $-.10$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .568450 | .504161 | .441699 | .380985 | .321951 | .264534 |
| 92 | .540151 | .475062 | .411826 | .350367 | .290617 | .232516 |
| 94 | .511923 | .446013 | .381985 | .319764 | .259283 | .200484 |
| 96 | .483725 | .416974 | .352134 | .289132 | .227905 | .168396 |
| 98 | .455519 | .387903 | .322230 | .258430 | .196442 | .136209 |
| 100 | .427262 | .358759 | .292232 | .227616 | .164848 | .103878 |
| 102 | .398915 | .329499 | .262097 | .196644 | .133081 | .071359 |
| 104 | .370435 | .300081 | .231781 | .165471 | .101095 | .038606 |
| 106 | .341778 | .270460 | .201237 | .134049 | .068842 | .005570 |
| 108 | .312900 | .240590 | .170420 | .102331 | .036273 | -.027796 |
| 110 | .283753 | .210422 | .139279 | .070267 | .003338 | -.061547 |
| 112 | .254290 | .179907 | .107762 | .037802 | -.030018 | -.095737 |
| 114 | .224457 | .148991 | .075816 | .004882 | -.063852 | -.130423 |
| 116 | .194202 | .117617 | .043381 | -.028552 | -.098225 | -.165667 |
| 118 | .163465 | .085726 | .010397 | -.062566 | -.133200 | -.201535 |
| | | | | | | |
| 120 | .132184 | .053253 | -.023204 | -.097227 | -.168849 | -.238097 |
| 122 | .100292 | .020128 | -.057493 | -.132608 | -.205246 | -.275430 |
| 124 | .067717 | -.013723 | -.092548 | -.168789 | -.242472 | -.313617 |
| 126 | .034378 | -.048385 | -.128454 | -.205857 | -.280617 | -.352750 |
| 128 | .000189 | -.083946 | -.165304 | -.243909 | -.319779 | -.392927 |
| 130 | -.034944 | -.120505 | -.203200 | -.283049 | -.360066 | -.434259 |
| 132 | -.071131 | -.158175 | -.242258 | -.323396 | -.401598 | -.476869 |
| 134 | -.108487 | -.197076 | -.282604 | -.365080 | -.444509 | -.520893 |
| 136 | -.147146 | -.237348 | -.324381 | -.408248 | -.488951 | -.566485 |
| 138 | -.187259 | -.279147 | -.367750 | -.453067 | -.535094 | -.613820 |
| 140 | -.228995 | -.322651 | -.412897 | -.499727 | -.583132 | -.663096 |
| 142 | -.272551 | -.368063 | -.460032 | -.548446 | -.633289 | -.714541 |
| 144 | -.318153 | -.415619 | -.509399 | -.599474 | -.685822 | -.768419 |
| 146 | -.366066 | -.465595 | -.561284 | -.653106 | -.741035 | -.825037 |
| 148 | -.416599 | -.518314 | -.616021 | -.709689 | -.799280 | -.884758 |
| | | | | | | |
| 150 | -.470122 | -.574161 | -.674011 | -.769633 | -.860982 | -.948015 |
| 152 | -.527079 | -.633599 | -.735734 | -.833434 | -.926648 | -1.015325 |
| 154 | -.588014 | -.697195 | -.801775 | -.901697 | -.996899 | -1.087325 |
| 156 | -.653595 | -.765646 | -.872861 | -.975170 | -1.072505 | -1.164799 |
| 158 | -.724668 | -.839835 | -.949903 | -1.054795 | -1.154432 | -1.248737 |
| 160 | -.802317 | -.920891 | -1.034077 | -1.141785 | -1.243924 | -1.340410 |
| 162 | -.887968 | -1.010303 | -1.126925 | -1.237730 | -1.342617 | -1.441490 |
| 164 | -.983549 | -1.110081 | -1.230533 | -1.344786 | -1.452724 | -1.554241 |
| 166 | -1.091761 | -1.223045 | -1.347827 | -1.465970 | -1.577346 | -1.681831 |
| 168 | -1.216555 | -1.353317 | -1.483085 | -1.605701 | -1.721019 | -1.828902 |
| 170 | -1.364055 | -1.507287 | -1.642935 | -1.770821 | -1.890776 | -2.002645 |
| 172 | -1.544509 | -1.695649 | -1.838478 | -1.972790 | -2.098391 | -2.215102 |
| 174 | -1.777123 | -1.938446 | -2.090514 | -2.233083 | -2.365928 | -2.488840 |
| 176 | -2.104995 | -2.280656 | -2.445722 | -2.599897 | -2.742910 | -2.874514 |
| 178 | -2.665611 | -2.865762 | -3.053015 | -3.226988 | -3.387332 | -3.533730 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | $-.10$ | $-.08$ | $-.06$ | $-.04$ | $-.02$ | $.00$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 4.225980 | 4.188130 | 4.151485 | 4.115977 | 4.081543 | 4.048125 |
| 4 | 3.532881 | 3.494964 | 3.458251 | 3.422672 | 3.388166 | 3.354673 |
| 6 | 3.127430 | 3.089413 | 3.052598 | 3.016915 | 2.982302 | 2.948700 |
| 8 | 2.839702 | 2.801559 | 2.764613 | 2.728796 | 2.694047 | 2.660306 |
| 10 | 2.616439 | 2.578142 | 2.541040 | 2.505064 | 2.470152 | 2.436246 |
| 12 | 2.433909 | 2.395436 | 2.358155 | 2.321997 | 2.286898 | 2.252802 |
| 14 | 2.279452 | 2.240782 | 2.203299 | 2.166937 | 2.131631 | 2.097324 |
| 16 | 2.145507 | 2.106619 | 2.068916 | 2.032329 | 1.996795 | 1.962257 |
| 18 | 2.027194 | 1.988071 | 1.950128 | 1.913298 | 1.877517 | 1.842730 |
| 20 | 1.921181 | 1.881804 | 1.843604 | 1.806513 | 1.770469 | 1.735415 |
| 22 | 1.825088 | 1.785440 | 1.746966 | 1.709599 | 1.673275 | 1.637938 |
| 24 | 1.737157 | 1.697223 | 1.658459 | 1.620800 | 1.584181 | 1.548547 |
| 26 | 1.656052 | 1.615816 | 1.576748 | 1.538782 | 1.501854 | 1.465908 |
| 28 | 1.580733 | 1.540181 | 1.500794 | 1.462507 | 1.425256 | 1.388985 |
| 30 | 1.510374 | 1.469491 | 1.429772 | 1.391151 | 1.353565 | 1.316957 |
| 32 | 1.444309 | 1.403082 | 1.363018 | 1.324050 | 1.286116 | 1.249160 |
| 34 | 1.381991 | 1.340407 | 1.299985 | 1.260658 | 1.222365 | 1.185050 |
| 36 | 1.322966 | 1.281014 | 1.240222 | 1.200525 | 1.161861 | 1.124177 |
| 38 | 1.266855 | 1.224521 | 1.183347 | 1.143269 | 1.104225 | 1.066161 |
| 40 | 1.213333 | 1.170606 | 1.129040 | 1.088570 | 1.049135 | 1.010683 |
| 42 | 1.162124 | 1.118992 | 1.077023 | 1.036150 | .996317 | .957466 |
| 44 | 1.112989 | 1.069441 | 1.027057 | .985773 | .945531 | .906275 |
| 46 | 1.065719 | 1.021744 | .978936 | .937231 | .896571 | .856902 |
| 48 | 1.020132 | .975719 | .932478 | .890342 | .849257 | .809167 |
| 50 | .976066 | .931206 | .887520 | .844946 | .803427 | .762909 |
| 52 | .933379 | .888060 | .843921 | .800900 | .758939 | .717988 |
| 54 | .891941 | .846154 | .801553 | .758076 | .715667 | .674275 |
| 56 | .851638 | .805373 | .760301 | .716360 | .673496 | .631658 |
| 58 | .812366 | .765613 | .720060 | .675649 | .632323 | .590032 |
| 60 | .774030 | .726779 | .680738 | .635847 | .592053 | .549306 |
| 62 | .736543 | .688784 | .642246 | .596870 | .552601 | .509392 |
| 64 | .699825 | .651550 | .604506 | .558637 | .513888 | .470212 |
| 66 | .663804 | .615002 | .567445 | .521075 | .475841 | .431694 |
| 68 | .628411 | .579073 | .530994 | .484118 | .438392 | .393771 |
| 70 | .593581 | .543699 | .495091 | .447700 | .401478 | .356378 |
| 72 | .559257 | .508820 | .459674 | .411764 | .365040 | .319458 |
| 74 | .525381 | .474380 | .424688 | .376251 | .329021 | .282954 |
| 76 | .491899 | .440326 | .390080 | .341111 | .293369 | .246814 |
| 78 | .458762 | .406606 | .355799 | .306290 | .258033 | .210987 |
| 80 | .425919 | .373171 | .321795 | .271742 | .222965 | .175425 |
| 82 | .393325 | .339976 | .288023 | .237418 | .188117 | .140082 |
| 84 | .360934 | .306973 | .254435 | .203273 | .153445 | .104911 |
| 86 | .328700 | .274118 | .220988 | .169263 | .118902 | .069870 |
| 88 | .296581 | .241369 | .187638 | .135344 | .084447 | .034913 |
| 90 | .264534 | .208681 | .154341 | .101472 | .050037 | .000000 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | $-.10$ | $-.08$ | $-.06$ | $-.04$ | $-.02$ | $.00$ |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .264534 | .208680 | .154341 | .101472 | .050036 | -.000000 |
| 92 | .232516 | .176011 | .121054 | .067605 | .015627 | -.034913 |
| 94 | .200484 | .143317 | .087736 | .033700 | -.018824 | -.069870 |
| 96 | .168396 | .110557 | .054342 | -.000285 | -.053360 | -.104911 |
| 98 | .136209 | .077685 | .020829 | -.034396 | -.088024 | -.140082 |
| 100 | .103878 | .044660 | -.012846 | -.068677 | -.122861 | -.175425 |
| 102 | .071359 | .011434 | -.046732 | -.103173 | -.157916 | -.210987 |
| 104 | .038606 | -.022038 | -.080873 | -.137930 | -.193236 | -.246814 |
| 106 | .005570 | -.055804 | -.115318 | -.172998 | -.228870 | -.282954 |
| 108 | -.027796 | -.089916 | -.150118 | -.208427 | -.264867 | -.319458 |
| 110 | -.061547 | -.124425 | -.185325 | -.244270 | -.301282 | -.356378 |
| 112 | -.095737 | -.159387 | -.220995 | -.280583 | -.338170 | -.393771 |
| 114 | -.130423 | -.194860 | -.257187 | -.317425 | -.375589 | -.431694 |
| 116 | -.165667 | -.230906 | -.293964 | -.354859 | -.413605 | -.470212 |
| 118 | -.201535 | -.267593 | -.331394 | -.392953 | -.452283 | -.509392 |
| | | | | | | |
| 120 | -.238097 | -.304991 | -.369548 | -.431780 | -.491697 | -.549306 |
| 122 | -.275430 | -.343178 | -.408504 | -.471417 | -.531925 | -.590032 |
| 124 | -.313617 | -.382239 | -.448348 | -.511952 | -.573054 | -.631658 |
| 126 | -.352750 | -.422266 | -.489174 | -.553477 | -.615177 | -.674275 |
| 128 | -.392927 | -.463360 | -.531082 | -.596095 | -.658398 | -.717988 |
| 130 | -.434259 | -.505632 | -.574187 | -.639920 | -.702830 | -.762909 |
| 132 | -.476869 | -.549208 | -.618613 | -.685079 | -.748600 | -.809167 |
| 134 | -.520893 | -.594226 | -.664502 | -.731714 | -.795851 | -.856902 |
| 136 | -.566485 | -.640842 | -.712012 | -.779983 | -.844741 | -.906275 |
| 138 | -.613820 | -.689234 | -.761322 | -.830067 | -.895454 | -.957466 |
| 140 | -.663096 | -.739603 | -.812635 | -.882171 | -.948193 | -1.010683 |
| 142 | -.714541 | -.792181 | -.866186 | -.936533 | -1.003198 | -1.066161 |
| 144 | -.768419 | -.847237 | -.922248 | -.993426 | -1.060743 | -1.124177 |
| 146 | -.825037 | -.905082 | -.981136 | -1.053169 | -1.121149 | -1.185050 |
| 148 | -.884758 | -.966086 | -1.043224 | -1.116138 | -1.184794 | -1.249160 |
| | | | | | | |
| 150 | -.948015 | -1.030687 | -1.108957 | -1.182784 | -1.252128 | -1.316957 |
| 152 | -1.015325 | -1.099416 | -1.178871 | -1.253645 | -1.323696 | -1.388985 |
| 154 | -1.087325 | -1.172917 | -1.253619 | -1.329382 | -1.400159 | -1.465908 |
| 156 | -1.164799 | -1.251989 | -1.334012 | -1.410812 | -1.482339 | -1.548547 |
| 158 | -1.248737 | -1.337639 | -1.421069 | -1.498965 | -1.571271 | -1.637938 |
| 160 | -1.340410 | -1.431162 | -1.516102 | -1.595164 | -1.668285 | -1.735415 |
| 162 | -1.441490 | -1.534258 | -1.620836 | -1.701151 | -1.775134 | -1.842730 |
| 164 | -1.554241 | -1.649232 | -1.737607 | -1.819283 | -1.894186 | -1.962257 |
| 166 | -1.681831 | -1.779312 | -1.869687 | -1.952864 | -2.028765 | -2.097324 |
| 168 | -1.828902 | -1.929222 | -2.021865 | -2.106731 | -2.183733 | -2.252802 |
| 170 | -2.002645 | -2.106284 | -2.201567 | -2.288381 | -2.366632 | -2.436246 |
| 172 | -2.215102 | -2.322761 | -2.421225 | -2.510369 | -2.590090 | -2.660306 |
| 174 | -2.488840 | -2.601634 | -2.704145 | -2.796232 | -2.877780 | -2.948700 |
| 176 | -2.874514 | -2.994487 | -3.102637 | -3.198801 | -3.282847 | -3.354673 |
| 178 | -3.533730 | -3.665902 | -3.783608 | -3.886646 | -3.974858 | -4.048125 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos \theta)$$

| $\nu$ | .00 | .02 | .04 | .06 | .08 | .10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 4.048125 | 4.015668 | 3.984122 | 3.953440 | 3.923579 | 3.894501 |
| 4 | 3.354673 | 3.322140 | 3.290515 | 3.259753 | 3.229812 | 3.200650 |
| 6 | 2.948700 | 2.916055 | 2.884316 | 2.853438 | 2.823377 | 2.794094 |
| 8 | 2.660306 | 2.627518 | 2.595635 | 2.564610 | 2.534399 | 2.504963 |
| 10 | 2.436246 | 2.403290 | 2.371235 | 2.340035 | 2.309647 | 2.280031 |
| 12 | 2.252802 | 2.219654 | 2.187403 | 2.156005 | 2.125415 | 2.095594 |
| 14 | 2.097324 | 2.063961 | 2.031493 | 1.999874 | 1.969060 | 1.939014 |
| 16 | 1.962257 | 1.928660 | 1.895954 | 1.864095 | 1.833039 | 1.802746 |
| 18 | 1.842730 | 1.808880 | 1.775919 | 1.743802 | 1.712485 | 1.681929 |
| 20 | 1.735415 | 1.701296 | 1.668063 | 1.635671 | 1.604077 | 1.573241 |
| 22 | 1.637938 | 1.603534 | 1.570014 | 1.537332 | 1.505446 | 1.474316 |
| 24 | 1.548547 | 1.513843 | 1.480021 | 1.447035 | 1.414844 | 1.383407 |
| 26 | 1.465908 | 1.430891 | 1.396754 | 1.363452 | 1.330942 | 1.299187 |
| 28 | 1.388985 | 1.353642 | 1.319178 | 1.285547 | 1.252709 | 1.220624 |
| 30 | 1.316957 | 1.281276 | 1.246474 | 1.212504 | 1.179326 | 1.146901 |
| 32 | 1.249160 | 1.213130 | 1.177978 | 1.143659 | 1.110133 | 1.077360 |
| 34 | 1.185050 | 1.148661 | 1.113150 | 1.078473 | 1.044589 | 1.011460 |
| 36 | 1.124177 | 1.087419 | 1.051540 | 1.016496 | .982247 | .948755 |
| 38 | 1.066161 | 1.029025 | .992770 | .957352 | .922730 | .888869 |
| 40 | 1.010683 | .973160 | .936520 | .900721 | .865722 | .831486 |
| 42 | .957466 | .919549 | .882518 | .846331 | .810948 | .776333 |
| 44 | .906275 | .867956 | .830527 | .793947 | .758175 | .723177 |
| 46 | .856902 | .818174 | .780341 | .743363 | .707199 | .671814 |
| 48 | .809167 | .770023 | .731781 | .694400 | .657839 | .622066 |
| 50 | .762909 | .723344 | .684688 | .646899 | .609940 | .573775 |
| 52 | .717988 | .677996 | .638921 | .600721 | .563361 | .526804 |
| 54 | .674275 | .633851 | .594353 | .555740 | .517977 | .481027 |
| 56 | .631658 | .590797 | .550872 | .511844 | .473676 | .436334 |
| 58 | .590032 | .548731 | .508376 | .468930 | .430357 | .392623 |
| 60 | .549306 | .507559 | .466772 | .426907 | .387928 | .349804 |
| 62 | .509392 | .467197 | .425975 | .385689 | .346306 | .307792 |
| 64 | .470212 | .427565 | .385907 | .345201 | .305413 | .266513 |
| 66 | .431694 | .388592 | .346496 | .305369 | .265179 | .225896 |
| 68 | .393771 | .350211 | .307676 | .266128 | .225538 | .185875 |
| 70 | .356378 | .312359 | .269383 | .227417 | .186428 | .146389 |
| 72 | .319458 | .274977 | .231562 | .189177 | .147794 | .107383 |
| 74 | .282954 | .238010 | .194154 | .151354 | .109579 | .068803 |
| 76 | .246814 | .201406 | .157110 | .113896 | .071734 | .030598 |
| 78 | .210987 | .165114 | .120379 | .076754 | .034209 | -.007279 |
| 80 | .175425 | .129086 | .083914 | .039880 | -.003041 | -.044876 |
| 82 | .140082 | .093276 | .047668 | .003230 | -.040063 | -.082236 |
| 84 | .104911 | .057639 | .011597 | -.033240 | -.076899 | -.119402 |
| 86 | .069870 | .022131 | -.024341 | -.069575 | -.113593 | -.156416 |
| 88 | .034913 | -.013290 | -.060191 | -.105815 | -.150185 | -.193319 |
| 90 | .000000 | -.048668 | -.095995 | -.142004 | -.186716 | -.230151 |

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$$Q_\nu(\cos\theta)$$

| $\nu$ | .00 | .02 | .04 | .06 | .08 | .10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | −.000000 | −.048668 | −.095995 | −.142004 | −.186717 | −.230151 |
| 92 | −.034913 | −.084045 | −.131794 | −.178182 | −.223229 | −.266953 |
| 94 | −.069870 | −.119463 | −.167629 | −.214389 | −.259762 | −.303763 |
| 96 | −.104911 | −.154965 | −.203544 | −.250669 | −.296357 | −.340622 |
| 98 | −.140082 | −.190594 | −.239581 | −.287063 | −.333055 | −.377572 |
| 100 | −.175425 | −.226392 | −.275782 | −.323613 | −.369898 | −.414652 |
| 102 | −.210987 | −.262407 | −.312194 | −.360364 | −.406930 | −.451905 |
| 104 | −.246814 | −.298683 | −.348860 | −.397360 | −.444195 | −.489376 |
| 106 | −.282954 | −.335269 | −.385830 | −.434649 | −.481739 | −.527108 |
| 108 | −.319458 | −.372215 | −.423152 | −.472280 | −.519610 | −.565148 |
| 110 | −.356378 | −.409573 | −.460878 | −.510303 | −.557857 | −.603547 |
| 112 | −.393771 | −.447398 | −.499063 | −.548773 | −.596535 | −.642355 |
| 114 | −.431694 | −.485750 | −.537765 | −.587746 | −.635699 | −.681628 |
| 116 | −.470212 | −.524690 | −.577046 | −.627284 | −.675409 | −.721424 |
| 118 | −.509392 | −.564287 | −.616972 | −.667453 | −.715730 | −.761806 |
| | | | | | | |
| 120 | −.549306 | −.604611 | −.657615 | −.708322 | −.756730 | −.802842 |
| 122 | −.590032 | −.645741 | −.699052 | −.749967 | −.798485 | −.844605 |
| 124 | −.631658 | −.687762 | −.741368 | −.792473 | −.841076 | −.887175 |
| 126 | −.674275 | −.730768 | −.784654 | −.835929 | −.884592 | −.930639 |
| 128 | −.717988 | −.774860 | −.829012 | −.880437 | −.929133 | −.975094 |
| 130 | −.762909 | −.820153 | −.874554 | −.926107 | −.974806 | −1.020646 |
| 132 | −.809167 | −.866771 | −.921406 | −.973062 | −1.021733 | −1.067413 |
| 134 | −.856902 | −.914858 | −.969707 | −1.021440 | −1.070050 | −1.115529 |
| 136 | −.906275 | −.964570 | −1.019614 | −1.071398 | −1.119910 | −1.165144 |
| 138 | −.957466 | −1.016089 | −1.071308 | −1.123111 | −1.171486 | −1.216427 |
| 140 | −1.010683 | −1.069620 | −1.124991 | −1.176780 | −1.224977 | −1.269573 |
| 142 | −1.066161 | −1.125400 | −1.180898 | −1.232638 | −1.280610 | −1.324803 |
| 144 | −1.124177 | −1.183702 | −1.239300 | −1.290953 | −1.338649 | −1.382378 |
| 146 | −1.185050 | −1.244846 | −1.300514 | −1.352038 | −1.399402 | −1.442599 |
| 148 | −1.249160 | −1.309209 | −1.364916 | −1.416262 | −1.463234 | −1.505823 |
| | | | | | | |
| 150 | −1.316957 | −1.377240 | −1.432950 | −1.484068 | −1.530580 | −1.572475 |
| 152 | −1.388985 | −1.449481 | −1.505155 | −1.555987 | −1.601961 | −1.643070 |
| 154 | −1.465908 | −1.526594 | −1.582188 | −1.632668 | −1.678019 | −1.718234 |
| 156 | −1.548547 | −1.609398 | −1.664862 | −1.714915 | −1.759545 | −1.798745 |
| 158 | −1.637938 | −1.698926 | −1.754203 | −1.803745 | −1.847540 | −1.885583 |
| 160 | −1.735415 | −1.796508 | −1.851532 | −1.900464 | −1.943290 | −1.980011 |
| 162 | −1.842730 | −1.903892 | −1.958586 | −2.006789 | −2.048489 | −2.083690 |
| 164 | −1.962257 | −2.023446 | −2.077717 | −2.125049 | −2.165432 | −2.198872 |
| 166 | −2.097324 | −2.158489 | −2.212224 | −2.258508 | −2.297335 | −2.328716 |
| 168 | −2.252802 | −2.313883 | −2.366938 | −2.411948 | −2.448911 | −2.477845 |
| 170 | −2.436246 | −2.497163 | −2.549348 | −2.592781 | −2.627469 | −2.653434 |
| 172 | −2.660306 | −2.720955 | −2.772001 | −2.813430 | −2.845253 | −2.867504 |
| 174 | −2.948700 | −3.008926 | −3.058423 | −3.097182 | −3.125224 | −3.142598 |
| 176 | −3.354673 | −3.414213 | −3.461431 | −3.496329 | −3.518941 | −3.529336 |
| 178 | −4.048125 | −4.106374 | −4.149576 | −4.177746 | −4.190944 | −4.189277 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .10 | .12 | .14 | .16 | .18 | .20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 3.894501 | 3.866166 | 3.838540 | 3.811591 | 3.785288 | 3.759602 |
| 4 | 3.200650 | 3.172230 | 3.144517 | 3.117479 | 3.091086 | 3.065308 |
| 6 | 2.794094 | 2.765551 | 2.737713 | 2.710548 | 2.684024 | 2.658115 |
| 8 | 2.504963 | 2.476265 | 2.448269 | 2.420943 | 2.394257 | 2.358115 |
| 10 | 2.280031 | 2.251149 | 2.222968 | 2.195454 | 2.168577 | 2.142309 |
| 12 | 2.095594 | 2.066506 | 2.038114 | 2.010387 | 1.983295 | 1.956809 |
| 14 | 1.939014 | 1.909696 | 1.881072 | 1.853111 | 1.825782 | 1.799057 |
| 16 | 1.802746 | 1.773180 | 1.744306 | 1.716091 | 1.688506 | 1.661523 |
| 18 | 1.681929 | 1.652097 | 1.622954 | 1.594469 | 1.566612 | 1.539354 |
| 20 | 1.573241 | 1.543128 | 1.513702 | 1.484931 | 1.456786 | 1.429240 |
| 22 | 1.474316 | 1.443907 | 1.414184 | 1.385114 | 1.356669 | 1.328821 |
| 24 | 1.383407 | 1.352689 | 1.322656 | 1.293276 | 1.264519 | 1.236359 |
| 26 | 1.299187 | 1.268149 | 1.237795 | 1.208094 | 1.179016 | 1.150533 |
| 28 | 1.220624 | 1.189256 | 1.158572 | 1.128540 | 1.099131 | 1.070319 |
| | | | | | | |
| 30 | 1.146901 | 1.115194 | 1.084171 | 1.053801 | 1.024055 | .994906 |
| 32 | 1.077360 | 1.045305 | 1.013935 | .983220 | .953130 | .923639 |
| 34 | 1.011460 | .979051 | .947328 | .916262 | .885823 | .855986 |
| 36 | .948755 | .915984 | .883903 | .852482 | .821690 | .791504 |
| 38 | .888869 | .855733 | .823289 | .791507 | .760361 | .729823 |
| 40 | .831486 | .797978 | .765168 | .733025 | .701521 | .670631 |
| 42 | .776333 | .742451 | .709271 | .676764 | .644902 | .613661 |
| 44 | .723177 | .688918 | .655366 | .622494 | .590274 | .558681 |
| 46 | .671814 | .637175 | .603251 | .570013 | .537436 | .505495 |
| 48 | .622066 | .587046 | .552749 | .519147 | .486214 | .453927 |
| 50 | .573775 | .538373 | .503704 | .469739 | .436454 | .403825 |
| 52 | .526804 | .491020 | .455979 | .421654 | .388020 | .355053 |
| 54 | .481027 | .444862 | .409451 | .374769 | .340790 | .307492 |
| 56 | .436334 | .399788 | .364010 | .328974 | .294656 | .261033 |
| 58 | .392623 | .355699 | .319558 | .284173 | .249521 | .215581 |
| | | | | | | |
| 60 | .349804 | .312504 | .276003 | .240275 | .205296 | .171047 |
| 62 | .307792 | .270121 | .233264 | .197199 | .161901 | .127352 |
| 64 | .266513 | .228473 | .191267 | .154871 | .119264 | .084425 |
| 66 | .225896 | .187492 | .149942 | .113223 | .077315 | .042198 |
| 68 | .185875 | .147112 | .109225 | .072193 | .035994 | .000610 |
| 70 | .146389 | .107274 | .069058 | .031721 | -.004757 | -.040395 |
| 72 | .107383 | .067922 | .029385 | -.008246 | -.044992 | -.080871 |
| 74 | .068803 | .029002 | -.009845 | -.047761 | -.084763 | -.120866 |
| 76 | .030598 | -.009533 | -.048684 | -.086872 | -.124115 | -.160428 |
| 78 | -.007279 | -.047734 | -.087176 | -.125624 | -.163094 | -.199601 |
| 80 | -.044876 | -.085645 | -.125367 | -.164061 | -.201743 | -.238426 |
| 82 | -.082236 | -.123309 | -.163300 | -.202226 | -.240102 | -.276942 |
| 84 | -.119402 | -.160768 | -.201014 | -.240158 | -.278212 | -.315190 |
| 86 | -.156416 | -.198064 | -.238552 | -.277896 | -.316110 | -.353205 |
| 88 | -.193319 | -.235236 | -.275952 | -.315480 | -.353834 | -.391024 |
| | | | | | | |
| 90 | -.230151 | -.272325 | -.313252 | -.352947 | -.391421 | -.428683 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .10 | .12 | .14 | .16 | .18 | .20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | −.230151 | −.272325 | −.313253 | −.352947 | −.391421 | −.428684 |
| 92 | −.266953 | −.309369 | −.350492 | −.390334 | −.428906 | −.466218 |
| 94 | −.303763 | −.346408 | −.387709 | −.427679 | −.466326 | −.503661 |
| 96 | −.340622 | −.383480 | −.424941 | −.465017 | −.503716 | −.541048 |
| 98 | −.377572 | −.420626 | −.462228 | −.502388 | −.541114 | −.578414 |
| 100 | −.414652 | −.457885 | −.499608 | −.539828 | −.578555 | −.615794 |
| 102 | −.451905 | −.495299 | −.537121 | −.577378 | −.616077 | −.653224 |
| 104 | −.489376 | −.532911 | −.574808 | −.615076 | −.653718 | −.690742 |
| 106 | −.527108 | −.570764 | −.612713 | −.652963 | −.691519 | −.728384 |
| 108 | −.565148 | −.608903 | −.650880 | −.691084 | −.729520 | −.766191 |
| 110 | −.603547 | −.647378 | −.689355 | −.729482 | −.767764 | −.804205 |
| 112 | −.642355 | −.686238 | −.728187 | −.768206 | −.806298 | −.842467 |
| 114 | −.681628 | −.725537 | −.767428 | −.807304 | −.845169 | −.881026 |
| 116 | −.721424 | −.765332 | −.807133 | −.846832 | −.884429 | −.919928 |
| 118 | −.761806 | −.805683 | −.847362 | −.886845 | −.924132 | −.959228 |
| | | | | | | |
| 120 | −.802842 | −.846659 | −.888179 | −.927405 | −.964338 | −.998981 |
| 122 | −.844605 | −.888328 | −.929652 | −.968580 | −1.005111 | −1.039248 |
| 124 | −.887175 | −.930770 | −.971858 | −1.010441 | −1.046520 | −1.080096 |
| 126 | −.930639 | −.974068 | −1.014878 | −1.053069 | −1.088641 | −1.121598 |
| 128 | −.975094 | −1.018318 | −1.058804 | −1.096551 | −1.131560 | −1.163835 |
| 130 | −1.020646 | −1.063623 | −1.103736 | −1.140984 | −1.175369 | −1.206894 |
| 132 | −1.067413 | −1.110099 | −1.149787 | −1.186477 | −1.220172 | −1.250876 |
| 134 | −1.115529 | −1.157874 | −1.197081 | −1.233151 | −1.266086 | −1.295892 |
| 136 | −1.165144 | −1.207095 | −1.245761 | −1.281141 | −1.313241 | −1.342065 |
| 138 | −1.216427 | −1.257928 | −1.295987 | −1.330605 | −1.361786 | −1.389540 |
| 140 | −1.269573 | −1.310562 | −1.347943 | −1.381718 | −1.411893 | −1.438478 |
| 142 | −1.324803 | −1.365213 | −1.401839 | −1.434684 | −1.463756 | −1.489067 |
| 144 | −1.382378 | −1.422135 | −1.457921 | −1.489741 | −1.517603 | −1.541524 |
| 146 | −1.442599 | −1.481623 | −1.516476 | −1.547164 | −1.573700 | −1.596102 |
| 148 | −1.505823 | −1.544024 | −1.577840 | −1.607281 | −1.632362 | −1.653103 |
| | | | | | | |
| 150 | −1.572475 | −1.609754 | −1.642419 | −1.670482 | −1.693962 | −1.712885 |
| 152 | −1.643070 | −1.679313 | −1.710698 | −1.737237 | −1.758955 | −1.775881 |
| 154 | −1.718234 | −1.753315 | −1.783272 | −1.808122 | −1.827893 | −1.842620 |
| 156 | −1.798745 | −1.832518 | −1.860879 | −1.883850 | −1.901463 | −1.913760 |
| 158 | −1.885583 | −1.917881 | −1.944451 | −1.965322 | −1.980532 | −1.990130 |
| 160 | −1.980011 | −2.010635 | −2.035186 | −2.053698 | −2.066216 | −2.072798 |
| 162 | −2.083690 | −2.112405 | −2.134663 | −2.150505 | −2.159986 | −2.163172 |
| 164 | −2.198872 | −2.225391 | −2.245021 | −2.257814 | −2.263835 | −2.263162 |
| 166 | −2.328716 | −2.352677 | −2.369261 | −2.378531 | −2.380561 | −2.375446 |
| 168 | −2.477845 | −2.498783 | −2.511781 | −2.516910 | −2.514263 | −2.503950 |
| 170 | −2.653434 | −2.670722 | −2.679400 | −2.679557 | −2.671302 | −2.654766 |
| 172 | −2.867504 | −2.880242 | −2.883552 | −2.877540 | −2.862341 | −2.838110 |
| 174 | −3.142598 | −3.149380 | −3.145677 | −3.131623 | −3.107381 | −3.073143 |
| 176 | −3.529336 | −3.527618 | −3.513927 | −3.488434 | −3.451347 | −3.402907 |
| 178 | −4.189277 | −4.172395 | −4.141995 | −4.096817 | −4.037644 | −3.964805 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos \theta)$$

| $\nu$ | .20 | .22 | .24 | .26 | .28 | .30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 3.759602 | 3.734506 | 3.709976 | 3.685988 | 3.662520 | 3.639550 |
| 4 | 3.065308 | 3.040119 | 3.015495 | 2.991409 | 2.967843 | 2.944773 |
| 6 | 2.658115 | 2.632792 | 2.608031 | 2.583808 | 2.560101 | 2.536888 |
| 8 | 2.368182 | 2.342692 | 2.317761 | 2.293366 | 2.269484 | 2.246095 |
| 10 | 2.142309 | 2.116622 | 2.091493 | 2.066897 | 2.042812 | 2.019218 |
| 12 | 1.956809 | 1.930902 | 1.905550 | 1.880728 | 1.856416 | 1.832592 |
| 14 | 1.799057 | 1.772908 | 1.747312 | 1.722245 | 1.697684 | 1.673610 |
| 16 | 1.661523 | 1.635114 | 1.609256 | 1.583924 | 1.559098 | 1.534755 |
| 18 | 1.539354 | 1.512669 | 1.486532 | 1.460921 | 1.435813 | 1.411188 |
| 20 | 1.429240 | 1.402264 | 1.375836 | 1.349931 | 1.324529 | 1.299608 |
| 22 | 1.328821 | 1.301543 | 1.274811 | 1.248602 | 1.222894 | 1.197668 |
| 24 | 1.236359 | 1.208768 | 1.181722 | 1.155199 | 1.129177 | 1.103637 |
| 26 | 1.150533 | 1.122620 | 1.095252 | 1.068408 | 1.042065 | 1.016204 |
| 28 | 1.070319 | 1.042076 | 1.014380 | .987208 | .960539 | .934353 |
| 30 | .994906 | .966328 | .938298 | .910793 | .883794 | .857280 |
| 32 | .923639 | .894721 | .866354 | .838514 | .811182 | .784338 |
| 34 | .855986 | .826725 | .798017 | .769840 | .742175 | .715001 |
| 36 | .791504 | .761897 | .732848 | .704333 | .676335 | .648832 |
| 38 | .729823 | .699870 | .670479 | .641628 | .613297 | .585469 |
| 40 | .670631 | .640331 | .610599 | .581413 | .552755 | .524605 |
| 42 | .613661 | .583015 | .552944 | .523427 | .494444 | .465978 |
| 44 | .558681 | .527692 | .497286 | .467441 | .438140 | .409365 |
| 46 | .505495 | .474166 | .443428 | .413262 | .383649 | .354571 |
| 48 | .453927 | .422262 | .391198 | .360717 | .330800 | .301430 |
| 50 | .403825 | .371829 | .340446 | .309657 | .279444 | .249792 |
| 52 | .355053 | .322732 | .291037 | .259950 | .229452 | .199528 |
| 54 | .307492 | .274853 | .242855 | .211478 | .180706 | .150524 |
| 56 | .261033 | .228085 | .195792 | .164137 | .133104 | .102677 |
| 58 | .215581 | .182331 | .149755 | .117834 | .086553 | .055896 |
| 60 | .171047 | .137506 | .104658 | .072483 | .040968 | .010098 |
| 62 | .127352 | .093532 | .060423 | .028009 | -.003723 | -.034789 |
| 64 | .084425 | .050336 | .016980 | -.015657 | -.047591 | -.078835 |
| 66 | .042198 | .007853 | -.025734 | -.058580 | -.090698 | -.122101 |
| 68 | .000610 | -.033976 | -.067780 | -.100818 | -.133100 | -.164641 |
| 70 | -.040395 | -.075209 | -.109214 | -.142424 | -.174851 | -.206508 |
| 72 | -.080871 | -.115897 | -.150085 | -.183448 | -.215999 | -.247748 |
| 74 | -.120866 | -.156088 | -.190440 | -.223937 | -.256589 | -.288406 |
| 76 | -.160428 | -.195828 | -.230325 | -.263933 | -.296662 | -.328523 |
| 78 | -.199601 | -.235159 | -.269781 | -.303478 | -.336260 | -.368136 |
| 80 | -.238426 | -.274123 | -.308848 | -.342609 | -.375418 | -.407282 |
| 82 | -.276942 | -.312759 | -.347563 | -.381364 | -.414172 | -.445995 |
| 84 | -.315190 | -.351103 | -.385963 | -.419778 | -.452556 | -.484307 |
| 86 | -.353205 | -.389193 | -.424082 | -.457883 | -.490603 | -.522249 |
| 88 | -.391024 | -.427062 | -.461955 | -.495713 | -.528342 | -.559850 |
| 90 | -.428683 | -.464745 | -.499615 | -.533299 | -.565805 | -.597140 |

$$\varrho_\nu(\cos\theta)$$

| $\nu$ | .20 | .22 | .24 | .26 | .28 | .30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | −.428684 | −.464746 | −.499615 | −.533299 | −.565806 | −.597140 |
| 92 | −.466218 | −.502277 | −.537093 | −.570672 | −.603021 | −.634146 |
| 94 | −.503661 | −.539690 | −.574422 | −.607863 | −.640019 | −.670896 |
| 96 | −.541048 | −.577018 | −.611634 | −.644902 | −.676827 | −.707415 |
| 98 | −.578414 | −.614293 | −.648760 | −.681818 | −.713474 | −.743733 |
| 100 | −.615794 | −.651551 | −.685833 | −.718644 | −.749990 | −.779875 |
| 102 | −.653224 | −.688825 | −.722885 | −.755409 | −.786402 | −.815868 |
| 104 | −.690742 | −.726151 | −.759951 | −.792146 | −.822741 | −.851740 |
| 106 | −.728384 | −.763564 | −.797063 | −.828886 | −.859036 | −.887519 |
| 108 | −.766191 | −.801103 | −.834259 | −.865663 | −.895320 | −.923234 |
| 110 | −.804205 | −.838807 | −.871574 | −.902512 | −.931624 | −.958915 |
| 112 | −.842467 | −.876716 | −.909049 | −.939470 | −.967983 | −.994595 |
| 114 | −.881026 | −.914876 | −.946724 | −.976575 | −1.004433 | −1.030305 |
| 116 | −.919928 | −.953332 | −.984644 | −1.013869 | −1.041012 | −1.066080 |
| 118 | −.959228 | −.992134 | −1.022854 | −1.051395 | −1.077761 | −1.101960 |
| | | | | | | |
| 120 | −.998981 | −1.031335 | −1.061407 | −1.089200 | −1.114723 | −1.137983 |
| 122 | −1.039248 | −1.070994 | −1.100355 | −1.127336 | −1.151946 | −1.174194 |
| 124 | −1.080096 | −1.111174 | −1.139760 | −1.165859 | −1.189482 | −1.210639 |
| 126 | −1.121598 | −1.151944 | −1.179685 | −1.204829 | −1.227386 | −1.247370 |
| 128 | −1.163835 | −1.193380 | −1.220203 | −1.244313 | −1.265722 | −1.284445 |
| 130 | −1.206894 | −1.235566 | −1.261392 | −1.284385 | −1.304557 | −1.321926 |
| 132 | −1.250876 | −1.278597 | −1.303343 | −1.325129 | −1.343970 | −1.359885 |
| 134 | −1.295892 | −1.322577 | −1.346153 | −1.366636 | −1.384044 | −1.398399 |
| 136 | −1.342065 | −1.367626 | −1.389936 | −1.409013 | −1.424879 | −1.437559 |
| 138 | −1.389540 | −1.413878 | −1.434817 | −1.452377 | −1.466583 | −1.477465 |
| 140 | −1.438478 | −1.461489 | −1.480943 | −1.496866 | −1.509285 | −1.518233 |
| 142 | −1.489067 | −1.510635 | −1.528482 | −1.542635 | −1.553128 | −1.559997 |
| 144 | −1.541524 | −1.561523 | −1.577627 | −1.589867 | −1.598281 | −1.602913 |
| 146 | −1.596102 | −1.614394 | −1.628606 | −1.638775 | −1.644944 | −1.647162 |
| 148 | −1.653103 | −1.669534 | −1.681690 | −1.689612 | −1.693350 | −1.692959 |
| | | | | | | |
| 150 | −1.712885 | −1.727284 | −1.737199 | −1.742679 | −1.743779 | −1.740563 |
| 152 | −1.775881 | −1.788054 | −1.795522 | −1.798339 | −1.796569 | −1.790284 |
| 154 | −1.842620 | −1.852350 | −1.857135 | −1.857039 | −1.852135 | −1.842504 |
| 156 | −1.913760 | −1.920794 | −1.922627 | −1.919332 | −1.910991 | −1.897695 |
| 158 | −1.990130 | −1.994177 | −1.992746 | −1.985918 | −1.973787 | −1.956457 |
| 160 | −2.072798 | −2.073515 | −2.068449 | −2.057696 | −2.041361 | −2.019562 |
| 162 | −2.163172 | −2.160147 | −2.151006 | −2.135855 | −2.114817 | −2.088026 |
| 164 | −2.263162 | −2.255891 | −2.242131 | −2.222007 | −2.195656 | −2.163232 |
| 166 | −2.375446 | −2.363295 | −2.344237 | −2.318413 | −2.285982 | −2.247119 |
| 168 | −2.503950 | −2.486099 | −2.460857 | −2.428391 | −2.388883 | −2.342532 |
| 170 | −2.654766 | −2.630101 | −2.597478 | −2.557091 | −2.509151 | −2.453891 |
| 172 | −2.838110 | −2.805028 | −2.763298 | −2.713149 | −2.654828 | −2.588606 |
| 174 | −3.073143 | −3.029127 | −2.975579 | −2.912770 | −2.840999 | −2.760587 |
| 176 | −3.402907 | −3.343388 | −3.273095 | −3.192365 | −3.101565 | −3.001091 |
| 178 | −3.964805 | −3.878668 | −3.779643 | −3.668180 | −3.544765 | −3.409923 |
| | | | | | | |
| 180 | −∞ | −∞ | −∞ | −∞ | −∞ | −∞ |

$$Q_\nu(\cos \theta)$$

| $\nu$ | .30 | .32 | .34 | .36 | .38 | .40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 3.639550 | 3.617058 | 3.595027 | 3.573438 | 3.552274 | 3.531521 |
| 4 | 2.944773 | 2.922180 | 2.900046 | 2.878352 | 2.857083 | 2.836223 |
| 6 | 2.536888 | 2.514151 | 2.491871 | 2.470029 | 2.448610 | 2.427597 |
| 8 | 2.246095 | 2.223179 | 2.200718 | 2.178693 | 2.157089 | 2.135889 |
| 10 | 2.019218 | 1.996094 | 1.973423 | 1.951186 | 1.929368 | 1.907952 |
| 12 | 1.832592 | 1.809237 | 1.786332 | 1.763859 | 1.741802 | 1.720146 |
| 14 | 1.673610 | 1.650002 | 1.626843 | 1.604114 | 1.581799 | 1.559883 |
| 16 | 1.534755 | 1.510877 | 1.487447 | 1.464445 | 1.441856 | 1.419664 |
| 18 | 1.411188 | 1.387026 | 1.363309 | 1.340021 | 1.317144 | 1.294663 |
| 20 | 1.299608 | 1.275150 | 1.251136 | 1.227550 | 1.204374 | 1.181595 |
| 22 | 1.197668 | 1.172903 | 1.148583 | 1.124690 | 1.101208 | 1.078122 |
| 24 | 1.103637 | 1.078559 | 1.053925 | 1.029719 | 1.005924 | .982526 |
| 26 | 1.016204 | .990806 | .965854 | .941330 | .917219 | .893506 |
| 28 | .934353 | .908631 | .883357 | .858513 | .834083 | .810054 |
| | | | | | | |
| 30 | .857280 | .831232 | .805634 | .780469 | .755721 | .731377 |
| 32 | .784338 | .757963 | .732042 | .706557 | .681493 | .656837 |
| 34 | .715001 | .688300 | .662057 | .636255 | .610879 | .585915 |
| 36 | .648832 | .621808 | .595247 | .569132 | .543448 | .518183 |
| 38 | .585469 | .558126 | .531250 | .504828 | .478844 | .453286 |
| 40 | .524605 | .496946 | .469764 | .443042 | .416766 | .390924 |
| 42 | .465978 | .438012 | .410529 | .383516 | .356959 | .330843 |
| 44 | .409365 | .381098 | .353325 | .326031 | .299203 | .272827 |
| 46 | .354571 | .326013 | .297960 | .270397 | .243311 | .216689 |
| 48 | .301430 | .272591 | .244268 | .216449 | .189120 | .162268 |
| 50 | .249792 | .220683 | .192105 | .164044 | .136487 | .109422 |
| 52 | .199528 | .170164 | .141344 | .113056 | .085288 | .058029 |
| 54 | .150524 | .120917 | .091871 | .063374 | .035414 | .007980 |
| 56 | .102677 | .072843 | .043588 | .014900 | -.013232 | -.040819 |
| 58 | .055896 | .025851 | -.003595 | -.032454 | -.060738 | -.088456 |
| | | | | | | |
| 60 | .010098 | -.020139 | -.049757 | -.078768 | -.107180 | -.135004 |
| 62 | -.034789 | -.065202 | -.094972 | -.124110 | -.152628 | -.180533 |
| 64 | -.078835 | -.109402 | -.139302 | -.168545 | -.197142 | -.225101 |
| 66 | -.122101 | -.152800 | -.182807 | -.212130 | -.240780 | -.268765 |
| 68 | -.164641 | -.195451 | -.225540 | -.254917 | -.283593 | -.311573 |
| 70 | -.206508 | -.237404 | -.267550 | -.296954 | -.325625 | -.353571 |
| 72 | -.247748 | -.278706 | -.308882 | -.338284 | -.366920 | -.394798 |
| 74 | -.288406 | -.319400 | -.349577 | -.378947 | -.407516 | -.435292 |
| 76 | -.328523 | -.359524 | -.389673 | -.418979 | -.447448 | -.475087 |
| 78 | -.368136 | -.399116 | -.429207 | -.458416 | -.486750 | -.514215 |
| 80 | -.407282 | -.438211 | -.468211 | -.497288 | -.525451 | -.552703 |
| 82 | -.445995 | -.476841 | -.506716 | -.535627 | -.563579 | -.590580 |
| 84 | -.484307 | -.515037 | -.544752 | -.573458 | -.601162 | -.627868 |
| 86 | -.522249 | -.552828 | -.582347 | -.610810 | -.638224 | -.664593 |
| 88 | -.559850 | -.590243 | -.619527 | -.647706 | -.674787 | -.700774 |
| | | | | | | |
| 90 | -.597140 | -.627309 | -.656318 | -.684172 | -.710876 | -.736434 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .30 | .32 | .34 | .36 | .38 | .40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | −.597140 | −.627309 | −.656318 | −.684172 | −.710876 | −.736435 |
| 92 | −.634146 | −.664052 | −.692745 | −.720229 | −.746510 | −.771592 |
| 94 | −.670896 | −.700498 | −.728831 | −.755901 | −.781710 | −.806265 |
| 96 | −.707415 | −.736672 | −.764600 | −.791207 | −.816496 | −.840472 |
| 98 | −.743733 | −.772598 | −.800076 | −.826171 | −.850887 | −.874231 |
| 100 | −.779875 | −.808303 | −.835281 | −.860812 | −.884902 | −.907557 |
| 102 | −.815868 | −.843811 | −.870238 | −.895152 | −.918560 | −.940468 |
| 104 | −.851740 | −.879148 | −.904970 | −.929212 | −.951880 | −.972979 |
| 106 | −.887519 | −.914339 | −.939502 | −.963013 | −.984880 | −1.005108 |
| 108 | −.923234 | −.949411 | −.973856 | −.996577 | −1.017579 | −1.036872 |
| 110 | −.958915 | −.984392 | −1.008059 | −1.029925 | −1.049998 | −1.068285 |
| 112 | −.994595 | −1.019310 | −1.042136 | −1.063082 | −1.082156 | −1.099367 |
| 114 | −1.030305 | −1.054196 | −1.076115 | −1.096071 | −1.114074 | −1.130135 |
| 116 | −1.066080 | −1.089081 | −1.110024 | −1.128918 | −1.145775 | −1.160608 |
| 118 | −1.101960 | −1.124001 | −1.143893 | −1.161649 | −1.177281 | −1.190805 |
| | | | | | | |
| 120 | −1.137983 | −1.158991 | −1.177757 | −1.194295 | −1.208619 | −1.220748 |
| 122 | −1.174194 | −1.194090 | −1.211649 | −1.226885 | −1.239815 | −1.250459 |
| 124 | −1.210639 | −1.229342 | −1.245608 | −1.259454 | −1.270898 | −1.279963 |
| 126 | −1.247370 | −1.264795 | −1.279678 | −1.292039 | −1.301900 | −1.309286 |
| 128 | −1.284445 | −1.300499 | −1.313903 | −1.324680 | −1.332856 | −1.338458 |
| 130 | −1.321926 | −1.336511 | −1.348335 | −1.357423 | −1.363804 | −1.367510 |
| 132 | −1.359885 | −1.372897 | −1.383032 | −1.390318 | −1.394789 | −1.396479 |
| 134 | −1.398399 | −1.409727 | −1.418056 | −1.423421 | −1.425857 | −1.425405 |
| 136 | −1.437559 | −1.447082 | −1.453482 | −1.456795 | −1.457064 | −1.454334 |
| 138 | −1.477465 | −1.485054 | −1.489390 | −1.490514 | −1.488473 | −1.483318 |
| 140 | −1.518233 | −1.523748 | −1.525875 | −1.524659 | −1.520153 | −1.512416 |
| 142 | −1.559997 | −1.563287 | −1.563045 | −1.559326 | −1.552189 | −1.541696 |
| 144 | −1.602913 | −1.603810 | −1.601028 | −1.594627 | −1.584674 | −1.571239 |
| 146 | −1.647162 | −1.645483 | −1.639971 | −1.630692 | −1.617721 | −1.601139 |
| 148 | −1.692959 | −1.688502 | −1.680049 | −1.667675 | −1.651465 | −1.631506 |
| | | | | | | |
| 150 | −1.740563 | −1.733101 | −1.721472 | −1.705762 | −1.686063 | −1.662474 |
| 152 | −1.790284 | −1.779563 | −1.764495 | −1.745175 | −1.721708 | −1.694204 |
| 154 | −1.842504 | −1.828235 | −1.809428 | −1.786190 | −1.758638 | −1.726895 |
| 156 | −1.897695 | −1.879547 | −1.856657 | −1.829147 | −1.797145 | −1.760791 |
| 158 | −1.956457 | −1.934044 | −1.906672 | −1.874477 | −1.837604 | −1.796207 |
| 160 | −2.019562 | −1.992429 | −1.960104 | −1.922738 | −1.880493 | −1.833543 |
| 162 | −2.088026 | −2.055629 | −2.017784 | −1.974663 | −1.926448 | −1.873333 |
| 164 | −2.163232 | −2.124901 | −2.080843 | −2.031251 | −1.976330 | −1.916298 |
| 166 | −2.247119 | −2.202013 | −2.150868 | −2.093903 | −2.031350 | −1.963454 |
| 168 | −2.342532 | −2.289557 | −2.230190 | −2.164679 | −2.093287 | −2.016293 |
| 170 | −2.453891 | −2.391559 | −2.322425 | −2.246772 | −2.164903 | −2.077133 |
| 172 | −2.588606 | −2.514775 | −2.433646 | −2.345549 | −2.250833 | −2.149864 |
| 174 | −2.760587 | −2.671880 | −2.575247 | −2.471078 | −2.359783 | −2.241791 |
| 176 | −3.001091 | −2.891367 | −2.772842 | −2.645994 | −2.511318 | −2.369337 |
| 178 | −3.409923 | −3.264213 | −3.108225 | −2.942582 | −2.767935 | −2.584961 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| ν | .40 | .42 | .44 | .46 | .48 | .50 |
|---|-----|-----|-----|-----|-----|-----|
| θ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 3.531521 | 3.511163 | 3.491186 | 3.471575 | 3.452320 | 3.433407 |
| 4 | 2.836223 | 2.815755 | 2.795667 | 2.775946 | 2.756577 | 2.737549 |
| 6 | 2.427597 | 2.406976 | 2.386733 | 2.366854 | 2.347325 | 2.328137 |
| 8 | 2.135889 | 2.115078 | 2.094644 | 2.074571 | 2.054848 | 2.035462 |
| 10 | 1.907952 | 1.886923 | 1.866268 | 1.845974 | 1.826027 | 1.806415 |
| 12 | 1.720146 | 1.698876 | 1.677977 | 1.657437 | 1.637243 | 1.617382 |
| 14 | 1.559883 | 1.538352 | 1.517190 | 1.496386 | 1.475925 | 1.455797 |
| 16 | 1.419664 | 1.397855 | 1.376415 | 1.355331 | 1.334590 | 1.314180 |
| 18 | 1.294663 | 1.272565 | 1.250834 | 1.229459 | 1.208426 | 1.187724 |
| 20 | 1.181595 | 1.159197 | 1.137167 | 1.115491 | 1.094158 | 1.073156 |
| 22 | 1.078122 | 1.055418 | 1.033081 | 1.011100 | .989462 | .968155 |
| 24 | .982526 | .959510 | .936864 | .914574 | .892628 | .871015 |
| 26 | .893506 | .870177 | .847218 | .824618 | .802365 | .780446 |
| 28 | .810054 | .786412 | .763142 | .740234 | .717674 | .695453 |
| 30 | .731377 | .707423 | .683845 | .660632 | .637771 | .615253 |
| 32 | .656837 | .632574 | .608693 | .585180 | .562025 | .539217 |
| 34 | .585915 | .561349 | .537171 | .513366 | .489925 | .466837 |
| 36 | .518183 | .493322 | .468855 | .444768 | .421052 | .397695 |
| 38 | .453286 | .428139 | .403393 | .379035 | .355056 | .331444 |
| 40 | .390924 | .365501 | .340488 | .315873 | .291645 | .267794 |
| 42 | .330843 | .305158 | .279892 | .255033 | .230572 | .206500 |
| 44 | .272827 | .246893 | .221388 | .196303 | .171628 | .147352 |
| 46 | .216689 | .190521 | .164796 | .139502 | .114631 | .090174 |
| 48 | .162268 | .135883 | .109955 | .084473 | .059428 | .034811 |
| 50 | .109422 | .082839 | .056728 | .031079 | .005882 | -.018869 |
| 52 | .058029 | .031268 | .004995 | -.020797 | -.046121 | -.070982 |
| 54 | .007980 | -.018936 | -.045348 | -.071261 | -.096686 | -.121628 |
| 56 | -.040819 | -.067871 | -.094396 | -.120403 | -.145901 | -.170896 |
| 58 | -.088456 | -.115617 | -.142230 | -.168304 | -.193846 | -.218863 |
| 60 | -.135004 | -.162249 | -.188923 | -.215034 | -.240590 | -.265596 |
| 62 | -.180533 | -.207834 | -.234540 | -.260658 | -.286194 | -.311156 |
| 64 | -.225101 | -.252431 | -.279138 | -.305231 | -.330715 | -.355596 |
| 66 | -.268765 | -.296093 | -.322769 | -.348803 | -.374199 | -.398964 |
| 68 | -.311573 | -.338867 | -.365480 | -.391420 | -.416691 | -.441300 |
| 70 | -.353571 | -.380798 | -.407313 | -.433122 | -.458230 | -.482643 |
| 72 | -.394798 | -.421924 | -.448304 | -.473944 | -.498850 | -.523026 |
| 74 | -.435292 | -.462281 | -.488489 | -.513921 | -.538582 | -.562478 |
| 76 | -.475087 | -.501902 | -.527898 | -.553081 | -.577455 | -.601025 |
| 78 | -.514215 | -.540817 | -.566560 | -.591450 | -.615493 | -.638691 |
| 80 | -.552703 | -.579051 | -.604500 | -.629054 | -.652718 | -.675497 |
| 82 | -.590580 | -.616632 | -.641742 | -.665914 | -.689152 | -.711461 |
| 84 | -.627868 | -.653582 | -.678307 | -.702049 | -.724812 | -.746601 |
| 86 | -.664593 | -.689922 | -.714216 | -.737479 | -.759716 | -.780931 |
| 88 | -.700774 | -.725672 | -.749486 | -.772219 | -.793877 | -.814464 |
| 90 | -.736434 | -.760852 | -.784135 | -.806285 | -.827310 | -.847213 |

$$Q_\nu(\cos \theta)$$

| $\nu$ | .40 | .42 | .44 | .46 | .48 | .50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.736435 | -.760853 | -.784135 | -.806286 | -.827310 | -.847213 |
| 92 | -.771592 | -.795480 | -.818178 | -.839692 | -.860027 | -.879187 |
| 94 | -.806265 | -.829571 | -.851631 | -.872452 | -.892039 | -.910396 |
| 96 | -.840472 | -.863141 | -.884507 | -.904577 | -.923355 | -.940849 |
| 98 | -.874231 | -.896206 | -.916820 | -.936078 | -.953986 | -.970551 |
| 100 | -.907557 | -.928781 | -.948582 | -.966966 | -.983940 | -.999511 |
| 102 | -.940468 | -.960880 | -.979806 | -.997251 | -1.013224 | -1.027733 |
| 104 | -.972979 | -.992518 | -1.010503 | -1.026942 | -1.041846 | -1.055223 |
| 106 | -1.005108 | -1.023707 | -1.040684 | -1.056049 | -1.069812 | -1.081984 |
| 108 | -1.036872 | -1.054463 | -1.070362 | -1.084580 | -1.097129 | -1.108021 |
| 110 | -1.068285 | -1.084798 | -1.099547 | -1.112544 | -1.123803 | -1.133336 |
| 112 | -1.099367 | -1.114728 | -1.128251 | -1.139950 | -1.149838 | -1.157933 |
| 114 | -1.130135 | -1.144268 | -1.156486 | -1.166804 | -1.175241 | -1.181814 |
| 116 | -1.160608 | -1.173432 | -1.184263 | -1.193118 | -1.200016 | -1.204979 |
| 118 | -1.190805 | -1.202237 | -1.211594 | -1.218898 | -1.224170 | -1.227432 |
| 120 | -1.220748 | -1.230700 | -1.238494 | -1.244155 | -1.247706 | -1.249174 |
| 122 | -1.250459 | -1.258838 | -1.264976 | -1.268897 | -1.270630 | -1.270205 |
| 124 | -1.279963 | -1.286673 | -1.291054 | -1.293135 | -1.292948 | -1.290526 |
| 126 | -1.309286 | -1.314224 | -1.316745 | -1.316880 | -1.314665 | -1.310137 |
| 128 | -1.338458 | -1.341516 | -1.342066 | -1.340143 | -1.335787 | -1.329040 |
| 130 | -1.367510 | -1.368575 | -1.367037 | -1.362938 | -1.356321 | -1.347234 |
| 132 | -1.396479 | -1.395428 | -1.391680 | -1.385279 | -1.376274 | -1.364720 |
| 134 | -1.425405 | -1.422109 | -1.416017 | -1.407181 | -1.395654 | -1.381497 |
| 136 | -1.454334 | -1.448654 | -1.440078 | -1.428663 | -1.414470 | -1.397564 |
| 138 | -1.483318 | -1.475105 | -1.463892 | -1.449745 | -1.432731 | -1.412923 |
| 140 | -1.512416 | -1.501508 | -1.487496 | -1.470451 | -1.450450 | -1.427572 |
| 142 | -1.541696 | -1.527918 | -1.510929 | -1.490808 | -1.467640 | -1.441511 |
| 144 | -1.571239 | -1.554401 | -1.534241 | -1.510848 | -1.484315 | -1.454740 |
| 146 | -1.601139 | -1.581030 | -1.557487 | -1.530608 | -1.500495 | -1.467258 |
| 148 | -1.631506 | -1.607895 | -1.580734 | -1.550132 | -1.516202 | -1.479064 |
| 150 | -1.662474 | -1.635103 | -1.604063 | -1.569473 | -1.531461 | -1.490159 |
| 152 | -1.694204 | -1.662782 | -1.627569 | -1.588697 | -1.546305 | -1.500540 |
| 154 | -1.726895 | -1.691093 | -1.651373 | -1.607882 | -1.560773 | -1.510209 |
| 156 | -1.760791 | -1.720232 | -1.675623 | -1.627127 | -1.574915 | -1.519164 |
| 158 | -1.796207 | -1.750450 | -1.700507 | -1.646558 | -1.588791 | -1.527405 |
| 160 | -1.833543 | -1.782071 | -1.726268 | -1.666336 | -1.602485 | -1.534931 |
| 162 | -1.873333 | -1.815522 | -1.753229 | -1.686678 | -1.616102 | -1.541742 |
| 164 | -1.916298 | -1.851383 | -1.781825 | -1.707874 | -1.629788 | -1.547838 |
| 166 | -1.963454 | -1.890471 | -1.812672 | -1.730335 | -1.643750 | -1.553217 |
| 168 | -2.016293 | -1.933987 | -1.846673 | -1.754664 | -1.658288 | -1.557880 |
| 170 | -2.077133 | -1.983794 | -1.885231 | -1.781801 | -1.673873 | -1.561826 |
| 172 | -2.149864 | -2.043022 | -1.930705 | -1.813322 | -1.691294 | -1.565055 |
| 174 | -2.241791 | -2.117550 | -1.987522 | -1.852186 | -1.712033 | -1.567566 |
| 176 | -2.369337 | -2.220591 | -2.065637 | -1.905053 | -1.739426 | -1.569360 |
| 178 | -2.584961 | -2.394361 | -2.196858 | -1.993195 | -1.784130 | -1.570437 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | -1.570796 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .50 | .52 | .54 | .56 | .58 | .60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 3.433407 | 3.414824 | 3.396562 | 3.378609 | 3.360955 | 3.343592 |
| 4 | 2.737549 | 2.718851 | 2.700470 | 2.682398 | 2.664625 | 2.647139 |
| 6 | 2.328137 | 2.309275 | 2.290731 | 2.272493 | 2.254551 | 2.236896 |
| 8 | 2.035462 | 2.016402 | 1.997657 | 1.979216 | 1.731102 | 1.713006 |
| 10 | 1.806415 | 1.787127 | 1.768152 | 1.749481 | 1.541057 | 1.522705 |
| 12 | 1.617382 | 1.597844 | 1.578617 | 1.559691 | 1.378391 | 1.359765 |
| 14 | 1.455797 | 1.435990 | 1.416493 | 1.397297 | 1.235639 | 1.216728 |
| 16 | 1.314180 | 1.294091 | 1.274311 | 1.254830 | 1.108008 | 1.088804 |
| 18 | 1.187724 | 1.167341 | 1.147268 | 1.127493 | .992243 | .972740 |
| 20 | 1.073156 | 1.052474 | 1.032101 | 1.012027 | .886033 | .866230 |
| 22 | .968155 | .947169 | .926493 | .906118 | .787683 | .767583 |
| 24 | .871015 | .849724 | .828745 | .808067 | .695916 | .675523 |
| 26 | .780446 | .758852 | .737571 | .716596 | .609746 | .589067 |
| 28 | .695453 | .673559 | .651983 | .630715 | | |
| 30 | .615252 | .593066 | .571200 | .549648 | .528399 | .507445 |
| 32 | .539217 | .516745 | .494601 | .472774 | .451257 | .430041 |
| 34 | .466837 | .444092 | .421680 | .399592 | .377821 | .356358 |
| 36 | .397695 | .374689 | .352023 | .329690 | .307681 | .285988 |
| 38 | .331444 | .308191 | .285288 | .262726 | .240498 | .218594 |
| 40 | .267794 | .244312 | .221189 | .198418 | .175990 | .153898 |
| 42 | .206500 | .182807 | .159484 | .136524 | .113920 | .091664 |
| 44 | .147352 | .123469 | .099968 | .076843 | .054087 | .031692 |
| 46 | .090174 | .066122 | .042467 | .019202 | -.003679 | -.026185 |
| 48 | .034811 | .010615 | -.013168 | -.036547 | -.059526 | -.082113 |
| 50 | -.018869 | -.043184 | -.067069 | -.090532 | -.113579 | -.136215 |
| 52 | -.070982 | -.095388 | -.119346 | -.142863 | -.165945 | -.188598 |
| 54 | -.121628 | -.146096 | -.170097 | -.193636 | -.216719 | -.239353 |
| 56 | -.170896 | -.195396 | -.219406 | -.242933 | -.265982 | -.288559 |
| 58 | -.218863 | -.243361 | -.267347 | -.290827 | -.313805 | -.336287 |
| 60 | -.265596 | -.290059 | -.313986 | -.337380 | -.360249 | -.382595 |
| 62 | -.311156 | -.335549 | -.359378 | -.382649 | -.405367 | -.427536 |
| 64 | -.355596 | -.379881 | -.403575 | -.426682 | -.449207 | -.471154 |
| 66 | -.398964 | -.423102 | -.446620 | -.469520 | -.491809 | -.513490 |
| 68 | -.441300 | -.465252 | -.488551 | -.511202 | -.533209 | -.554576 |
| 70 | -.482643 | -.506366 | -.529404 | -.551759 | -.573438 | -.594442 |
| 72 | -.523026 | -.546477 | -.569207 | -.591221 | -.612522 | -.633114 |
| 74 | -.562478 | -.585611 | -.607988 | -.629611 | -.650485 | -.670613 |
| 76 | -.601025 | -.623795 | -.645769 | -.666952 | -.687347 | -.706958 |
| 78 | -.638691 | -.661049 | -.682572 | -.703263 | -.723125 | -.742164 |
| 80 | -.675497 | -.697393 | -.718413 | -.738559 | -.757835 | -.776245 |
| 82 | -.711461 | -.732845 | -.753308 | -.772854 | -.791487 | -.809212 |
| 84 | -.746601 | -.767419 | -.787271 | -.806161 | -.824093 | -.841073 |
| 86 | -.780931 | -.801128 | -.820313 | -.838489 | -.855661 | -.871835 |
| 88 | -.814464 | -.833985 | -.852444 | -.869847 | -.886198 | -.901503 |
| 90 | -.847213 | -.865998 | -.883673 | -.900241 | -.915708 | -.930081 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .50 | .52 | .54 | .56 | .58 | .60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.847213 | -.865999 | -.883673 | -.900241 | -.915709 | -.930081 |
| 92 | -.879187 | -.897178 | -.914006 | -.929677 | -.944196 | -.957571 |
| 94 | -.910396 | -.927531 | -.943450 | -.958158 | -.971664 | -.983974 |
| 96 | -.940848 | -.957064 | -.972008 | -.985688 | -.998112 | -1.009289 |
| 98 | -.970551 | -.985781 | -.999684 | -1.012268 | -1.023541 | -1.033513 |
| 100 | -.999511 | -1.013689 | -1.026481 | -1.037898 | -1.047949 | -1.056646 |
| 102 | -1.027733 | -1.040789 | -1.052400 | -1.062578 | -1.071334 | -1.078680 |
| 104 | -1.055223 | -1.067084 | -1.077441 | -1.086306 | -1.093692 | -1.099613 |
| 106 | -1.081984 | -1.092578 | -1.101605 | -1.109081 | -1.115019 | -1.119436 |
| 108 | -1.108021 | -1.117270 | -1.124890 | -1.130897 | -1.135309 | -1.138143 |
| 110 | -1.133336 | -1.141161 | -1.147294 | -1.151752 | -1.154556 | -1.155724 |
| 112 | -1.157933 | -1.164252 | -1.168815 | -1.171640 | -1.172751 | -1.172170 |
| 114 | -1.181814 | -1.186542 | -1.189448 | -1.190555 | -1.189886 | -1.187468 |
| 116 | -1.204979 | -1.208029 | -1.209190 | -1.208488 | -1.205950 | -1.201605 |
| 118 | -1.227432 | -1.228712 | -1.228035 | -1.225432 | -1.220932 | -1.214568 |
| 120 | -1.249174 | -1.248587 | -1.245977 | -1.241376 | -1.234818 | -1.226339 |
| 122 | -1.270205 | -1.267653 | -1.263009 | -1.256310 | -1.247594 | -1.236901 |
| 124 | -1.290526 | -1.285904 | -1.279123 | -1.270221 | -1.259243 | -1.246233 |
| 126 | -1.310137 | -1.303338 | -1.294309 | -1.283096 | -1.269747 | -1.254312 |
| 128 | -1.329040 | -1.319947 | -1.308556 | -1.294917 | -1.279084 | -1.261112 |
| 130 | -1.347234 | -1.335727 | -1.321853 | -1.305668 | -1.287231 | -1.266604 |
| 132 | -1.364720 | -1.350671 | -1.334186 | -1.315328 | -1.294162 | -1.270756 |
| 134 | -1.381497 | -1.364770 | -1.345539 | -1.323874 | -1.299846 | -1.273530 |
| 136 | -1.397564 | -1.378015 | -1.355895 | -1.331279 | -1.304248 | -1.274884 |
| 138 | -1.412923 | -1.390397 | -1.365232 | -1.337514 | -1.307329 | -1.274769 |
| 140 | -1.427572 | -1.401902 | -1.373528 | -1.342543 | -1.309042 | -1.273128 |
| 142 | -1.441511 | -1.412517 | -1.380755 | -1.346326 | -1.309336 | -1.269895 |
| 144 | -1.454740 | -1.422226 | -1.386880 | -1.348815 | -1.308147 | -1.264996 |
| 146 | -1.467258 | -1.431009 | -1.391867 | -1.349956 | -1.305402 | -1.258338 |
| 148 | -1.479064 | -1.438844 | -1.395671 | -1.349682 | -1.301015 | -1.249815 |
| 150 | -1.490159 | -1.445703 | -1.398238 | -1.347913 | -1.294880 | -1.239297 |
| 152 | -1.500540 | -1.451554 | -1.399504 | -1.344553 | -1.286870 | -1.226627 |
| 154 | -1.510209 | -1.456357 | -1.399389 | -1.339485 | -1.276830 | -1.211612 |
| 156 | -1.519164 | -1.460060 | -1.397794 | -1.332561 | -1.264564 | -1.194011 |
| 158 | -1.527405 | -1.462602 | -1.394593 | -1.323594 | -1.249826 | -1.173516 |
| 160 | -1.534931 | -1.463901 | -1.389624 | -1.312341 | -1.232294 | -1.149732 |
| 162 | -1.541742 | -1.463848 | -1.382674 | -1.298485 | -1.211547 | -1.122134 |
| 164 | -1.547838 | -1.462297 | -1.373451 | -1.281589 | -1.187007 | -1.090006 |
| 166 | -1.553217 | -1.459043 | -1.361544 | -1.261041 | -1.157863 | -1.052342 |
| 168 | -1.557880 | -1.453783 | -1.346351 | -1.235942 | -1.122922 | -1.007659 |
| 170 | -1.561826 | -1.446048 | -1.326935 | -1.204892 | -1.080326 | -.953652 |
| 172 | -1.565055 | -1.435047 | -1.301722 | -1.165537 | -1.026955 | -.886444 |
| 174 | -1.567566 | -1.419299 | -1.267752 | -1.113455 | -.956941 | -.798746 |
| 176 | -1.569361 | -1.395469 | -1.218372 | -1.038699 | -.857082 | -.674157 |
| 178 | -1.570437 | -1.352900 | -1.132313 | -.909474 | -.685186 | -.460252 |
| 180 | -1.570796 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

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$$Q_\nu(\cos\ \theta)$$

| $\nu$ | .60 | .62 | .64 | .66 | .68 | .70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 3.343592 | 3.326509 | 3.309698 | 3.293151 | 3.276860 | 3.260817 |
| 4 | 2.647139 | 2.629933 | 2.612998 | 2.596325 | 2.579907 | 2.563736 |
| 6 | 2.236896 | 2.219519 | 2.202411 | 2.185564 | 2.168969 | 2.152621 |
| 8 | 1.943209 | 1.925624 | 1.908306 | 1.891248 | 1.874441 | 1.857878 |
| 10 | 1.713006 | 1.695185 | 1.677630 | 1.660332 | 1.643285 | 1.626480 |
| 12 | 1.522705 | 1.504627 | 1.486812 | 1.469254 | 1.451945 | 1.434876 |
| 14 | 1.359765 | 1.341412 | 1.323322 | 1.305488 | 1.287901 | 1.270555 |
| 16 | 1.216728 | 1.198088 | 1.179712 | 1.161590 | 1.143716 | 1.126082 |
| 18 | 1.088804 | 1.069870 | 1.051200 | 1.032785 | 1.014617 | .996690 |
| 20 | .972740 | .953509 | .934541 | .915830 | .897367 | .879145 |
| 22 | .866230 | .846701 | .827436 | .808430 | .789673 | .771160 |
| 24 | .767583 | .747758 | .728200 | .708902 | .689857 | .671058 |
| 26 | .675523 | .655408 | .635564 | .615982 | .596657 | .577581 |
| 28 | .589067 | .568671 | .548550 | .528695 | .509102 | .489762 |
| 30 | .507445 | .486779 | .466393 | .446279 | .426431 | .406842 |
| 32 | .430041 | .409119 | .388482 | .368125 | .348039 | .328220 |
| 34 | .356358 | .335195 | .314326 | .293743 | .273440 | .253411 |
| 36 | .285988 | .264604 | .243521 | .222734 | .202236 | .182021 |
| 38 | .218594 | .197010 | .175736 | .154768 | .134099 | .113724 |
| 40 | .153898 | .132136 | .110696 | .089573 | .068760 | .048252 |
| 42 | .091664 | .069749 | .048169 | .026918 | .005991 | -.014617 |
| 44 | .031692 | .009652 | -.012039 | -.033387 | -.054397 | -.075074 |
| 46 | -.026185 | -.048321 | -.070093 | -.091506 | -.112566 | -.133277 |
| 48 | -.082113 | -.104314 | -.126134 | -.147578 | -.168652 | -.189359 |
| 50 | -.136215 | -.158447 | -.180281 | -.201720 | -.222770 | -.243435 |
| 52 | -.188598 | -.210826 | -.232637 | -.254033 | -.275020 | -.295601 |
| 54 | -.239353 | -.261541 | -.283290 | -.304603 | -.325485 | -.345940 |
| 56 | -.288559 | -.310669 | -.332316 | -.353505 | -.374239 | -.394523 |
| 58 | -.336287 | -.358277 | -.379781 | -.400801 | -.421343 | -.441409 |
| 60 | -.382595 | -.404424 | -.425741 | -.446548 | -.466850 | -.486649 |
| 62 | -.427536 | -.449160 | -.470244 | -.490791 | -.510805 | -.530288 |
| 64 | -.471154 | -.492528 | -.513333 | -.533571 | -.553247 | -.572363 |
| 66 | -.513490 | -.534566 | -.555043 | -.574922 | -.594208 | -.612904 |
| 68 | -.554576 | -.575307 | -.595405 | -.614874 | -.633717 | -.651937 |
| 70 | -.594442 | -.614777 | -.634445 | -.653451 | -.671796 | -.689485 |
| 72 | -.633114 | -.653001 | -.672186 | -.690673 | -.708465 | -.725565 |
| 74 | -.670613 | -.689999 | -.708647 | -.726559 | -.743740 | -.760192 |
| 76 | -.706958 | -.725788 | -.743842 | -.761122 | -.777633 | -.793377 |
| 78 | -.742164 | -.760383 | -.777785 | -.794374 | -.810154 | -.825129 |
| 80 | -.776245 | -.793794 | -.810486 | -.826323 | -.841312 | -.855454 |
| 82 | -.809212 | -.826032 | -.841952 | -.856977 | -.871110 | -.884357 |
| 84 | -.841073 | -.857103 | -.872191 | -.886339 | -.899553 | -.911838 |
| 86 | -.871835 | -.887014 | -.901205 | -.914412 | -.926641 | -.937899 |
| 88 | -.901503 | -.915767 | -.928997 | -.941197 | -.952376 | -.962538 |
| 90 | -.930081 | -.943365 | -.955567 | -.966694 | -.976753 | -.985752 |

| $\nu$ | .60 | .62 | .64 | .66 | .68 | .70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.930081 | -.943365 | -.955568 | -.966695 | -.976754 | -.985752 |
| 92 | -.957571 | -.969809 | -.980916 | -.990901 | -.999772 | -1.007537 |
| 94 | -.983974 | -.995097 | -1.005040 | -1.013813 | -1.021425 | -1.027886 |
| 96 | -1.009289 | -1.019227 | -1.027936 | -1.035426 | -1.041708 | -1.046793 |
| 98 | -1.033513 | -1.042196 | -1.049599 | -1.055734 | -1.060612 | -1.064248 |
| 100 | -1.056646 | -1.063999 | -1.070022 | -1.074728 | -1.078130 | -1.080243 |
| 102 | -1.078680 | -1.084631 | -1.089199 | -1.092401 | -1.094250 | -1.094764 |
| 104 | -1.099613 | -1.104084 | -1.107121 | -1.108741 | -1.108961 | -1.107801 |
| 106 | -1.119436 | -1.122350 | -1.123777 | -1.123737 | -1.122250 | -1.119338 |
| 108 | -1.138143 | -1.139419 | -1.139156 | -1.137377 | -1.134103 | -1.129360 |
| 110 | -1.155724 | -1.155280 | -1.153245 | -1.149645 | -1.144504 | -1.137849 |
| 112 | -1.172170 | -1.169921 | -1.166030 | -1.160525 | -1.153434 | -1.144786 |
| 114 | -1.187468 | -1.183328 | -1.177495 | -1.169999 | -1.160873 | -1.150150 |
| 116 | -1.201605 | -1.195485 | -1.187621 | -1.178048 | -1.166801 | -1.153917 |
| 118 | -1.214568 | -1.206375 | -1.196389 | -1.184648 | -1.171191 | -1.156060 |
| | | | | | | |
| 120 | -1.226339 | -1.215979 | -1.203777 | -1.189776 | -1.174019 | -1.156552 |
| 122 | -1.236901 | -1.224275 | -1.209760 | -1.193403 | -1.175253 | -1.155360 |
| 124 | -1.246233 | -1.231239 | -1.214310 | -1.195499 | -1.174860 | -1.152448 |
| 126 | -1.254312 | -1.236844 | -1.217398 | -1.196031 | -1.172803 | -1.147774 |
| 128 | -1.261112 | -1.241059 | -1.218987 | -1.194958 | -1.169039 | -1.141295 |
| 130 | -1.266604 | -1.243851 | -1.219040 | -1.192239 | -1.163520 | -1.132959 |
| 132 | -1.270756 | -1.245181 | -1.217511 | -1.187822 | -1.156194 | -1.122708 |
| 134 | -1.273530 | -1.245005 | -1.214352 | -1.181654 | -1.146998 | -1.110474 |
| 136 | -1.274884 | -1.243273 | -1.209504 | -1.173669 | -1.135863 | -1.096183 |
| 138 | -1.274769 | -1.239927 | -1.202902 | -1.163794 | -1.122707 | -1.079747 |
| 140 | -1.273128 | -1.234901 | -1.194470 | -1.151944 | -1.107437 | -1.061063 |
| 142 | -1.269895 | -1.228117 | -1.184119 | -1.138019 | -1.089943 | -1.040014 |
| 144 | -1.264996 | -1.219486 | -1.171745 | -1.121903 | -1.070096 | -1.016459 |
| 146 | -1.258338 | -1.208899 | -1.157225 | -1.103458 | -1.047745 | -.990233 |
| 148 | -1.249815 | -1.196231 | -1.140414 | -1.082520 | -1.022708 | -.961139 |
| | | | | | | |
| 150 | -1.239297 | -1.181327 | -1.121135 | -1.058891 | -.994766 | -.928937 |
| 152 | -1.226627 | -1.164001 | -1.099173 | -1.032328 | -.963652 | -.893336 |
| 154 | -1.211612 | -1.144025 | -1.074266 | -1.002535 | -.929036 | -.853976 |
| 156 | -1.194011 | -1.121111 | -1.046081 | -.969139 | -.890506 | -.810406 |
| 158 | -1.173516 | -1.094896 | -1.014200 | -.931667 | -.847537 | -.762052 |
| 160 | -1.149732 | -1.064908 | -.978079 | -.889504 | -.799446 | -.708169 |
| 162 | -1.122134 | -1.030524 | -.936997 | -.841838 | -.745333 | -.647767 |
| 164 | -1.090006 | -.990892 | -.889973 | -.787559 | -.683963 | -.579499 |
| 166 | -1.052342 | -.944814 | -.835620 | -.725101 | -.613600 | -.501459 |
| 168 | -1.007659 | -.890527 | -.771903 | -.652162 | -.531682 | -.410841 |
| 170 | -.953652 | -.825286 | -.695646 | -.565152 | -.434223 | -.303275 |
| 172 | -.886444 | -.744473 | -.601514 | -.458037 | -.314511 | -.171401 |
| 174 | -.798746 | -.639409 | -.479469 | -.319462 | -.159922 | -.001377 |
| 176 | -.674157 | -.490559 | -.306921 | -.123872 | .057961 | .237967 |
| 178 | -.460252 | -.235472 | -.011643 | .210447 | .430023 | .646320 |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .70 | .72 | .74 | .76 | .78 | .80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 3.260817 | 3.245015 | 3.229447 | 3.214107 | 3.198987 | 3.184082 |
| 4 | 2.563736 | 2.547804 | 2.532105 | 2.516632 | 2.501379 | 2.486340 |
| 6 | 2.152621 | 2.136510 | 2.120630 | 2.104975 | 2.089539 | 2.074314 |
| 8 | 1.857878 | 1.841551 | 1.825454 | 1.809580 | 1.793923 | 1.778477 |
| 10 | 1.626480 | 1.609909 | 1.593567 | 1.577447 | 1.561543 | 1.545847 |
| 12 | 1.434876 | 1.418042 | 1.401435 | 1.385048 | 1.368876 | 1.352912 |
| 14 | 1.270555 | 1.253442 | 1.236555 | 1.219889 | 1.203436 | 1.187191 |
| 16 | 1.126082 | 1.108681 | 1.091506 | 1.074551 | 1.057810 | 1.041277 |
| 18 | .996690 | .978996 | .961529 | .944283 | .927250 | .910427 |
| 20 | .879145 | .861158 | .843399 | .825862 | .808540 | .791428 |
| 22 | .771160 | .752882 | .734835 | .717012 | .699406 | .682012 |
| 24 | .671058 | .652498 | .634170 | .616069 | .598189 | .580525 |
| 26 | .577581 | .558748 | .540151 | .521785 | .503644 | .485722 |
| 28 | .489762 | .470669 | .451818 | .433202 | .414816 | .396655 |
| 30 | .406842 | .387507 | .368418 | .349571 | .330960 | .312580 |
| 32 | .328220 | .308661 | .289355 | .270299 | .251486 | .232912 |
| 34 | .253411 | .233650 | .214152 | .194910 | .175921 | .157178 |
| 36 | .182021 | .162083 | .142416 | .123017 | .103880 | .084999 |
| 38 | .113724 | .093636 | .073831 | .054304 | .035049 | .016063 |
| 40 | .048252 | .028044 | .008131 | -.011491 | -.030828 | -.049885 |
| 42 | -.014617 | -.034913 | -.054901 | -.074585 | -.093969 | -.113059 |
| 44 | -.075074 | -.095424 | -.115451 | -.135159 | -.154552 | -.173634 |
| 46 | -.133277 | -.153644 | -.173672 | -.193365 | -.212725 | -.231759 |
| 48 | -.189359 | -.209706 | -.229695 | -.249330 | -.268616 | -.287555 |
| 50 | -.243435 | -.263720 | -.283628 | -.303163 | -.322328 | -.341128 |
| 52 | -.295601 | -.315781 | -.335565 | -.354954 | -.373952 | -.392563 |
| 54 | -.345940 | -.365972 | -.385584 | -.404780 | -.423562 | -.441935 |
| 56 | -.394523 | -.414359 | -.433753 | -.452706 | -.471222 | -.489303 |
| 58 | -.441409 | -.461002 | -.480128 | -.498787 | -.516984 | -.534721 |
| 60 | -.486649 | -.505950 | -.524756 | -.543069 | -.560893 | -.578229 |
| 62 | -.530288 | -.549245 | -.567679 | -.585591 | -.602986 | -.619865 |
| 64 | -.572363 | -.590923 | -.608929 | -.626385 | -.643294 | -.659657 |
| 66 | -.612904 | -.631012 | -.648536 | -.665478 | -.681842 | -.697630 |
| 68 | -.651937 | -.669538 | -.686521 | -.702891 | -.718650 | -.733801 |
| 70 | -.689485 | -.706521 | -.722906 | -.738643 | -.753736 | -.768188 |
| 72 | -.725565 | -.741977 | -.757703 | -.772747 | -.787112 | -.800801 |
| 74 | -.760192 | -.775920 | -.790926 | -.805213 | -.818786 | -.831649 |
| 76 | -.793377 | -.808359 | -.822582 | -.836051 | -.848767 | -.860737 |
| 78 | -.825129 | -.839303 | -.852680 | -.865264 | -.877059 | -.888069 |
| 80 | -.855454 | -.868756 | -.881222 | -.892856 | -.903662 | -.913647 |
| 82 | -.884357 | -.896722 | -.908210 | -.918827 | -.928579 | -.937470 |
| 84 | -.911838 | -.923200 | -.933645 | -.943178 | -.951806 | -.959534 |
| 86 | -.937899 | -.948191 | -.957524 | -.965905 | -.973340 | -.979838 |
| 88 | -.962538 | -.971692 | -.979845 | -.987004 | -.993178 | -.998375 |
| 90 | -.985752 | -.993699 | -1.000602 | -1.006469 | -1.011312 | -1.015138 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .70 | .72 | .74 | .76 | .78 | .80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | −.985752 | −.993699 | −1.000602 | −1.006470 | −1.011312 | −1.015138 |
| 92 | −1.007537 | −1.014206 | −1.019789 | −1.024295 | −1.027735 | −1.030120 |
| 94 | −1.027886 | −1.033207 | −1.037398 | −1.040471 | −1.042438 | −1.043312 |
| 96 | −1.046793 | −1.050693 | −1.053421 | −1.054989 | −1.055412 | −1.054703 |
| 98 | −1.064248 | −1.066655 | −1.067846 | −1.067837 | −1.066644 | −1.064282 |
| 100 | −1.080243 | −1.081082 | −1.080663 | −1.079004 | −1.076122 | −1.072036 |
| 102 | −1.094764 | −1.093961 | −1.091859 | −1.088476 | −1.083833 | −1.077951 |
| 104 | −1.107801 | −1.105280 | −1.101418 | −1.096237 | −1.089761 | −1.082011 |
| 106 | −1.119338 | −1.115022 | −1.109325 | −1.102272 | −1.093888 | −1.084200 |
| 108 | −1.129360 | −1.123171 | −1.115563 | −1.106562 | −1.096198 | −1.084499 |
| 110 | −1.137849 | −1.129708 | −1.120111 | −1.109087 | −1.096668 | −1.082887 |
| 112 | −1.144786 | −1.134613 | −1.122948 | −1.109825 | −1.095278 | −1.079343 |
| 114 | −1.150150 | −1.137864 | −1.124052 | −1.108751 | −1.092001 | −1.073841 |
| 116 | −1.153917 | −1.139435 | −1.123395 | −1.105840 | −1.086811 | −1.066353 |
| 118 | −1.156060 | −1.139298 | −1.120949 | −1.101060 | −1.079677 | −1.056850 |
| 120 | −1.156552 | −1.137424 | −1.116682 | −1.094379 | −1.070566 | −1.045297 |
| 122 | −1.155360 | −1.133777 | −1.110559 | −1.085760 | −1.059439 | −1.031655 |
| 124 | −1.152448 | −1.128320 | −1.102538 | −1.075162 | −1.046255 | −1.015883 |
| 126 | −1.147774 | −1.121010 | −1.092575 | −1.062537 | −1.030965 | −.997930 |
| 128 | −1.141295 | −1.111799 | −1.080621 | −1.047834 | −1.013516 | −.977743 |
| 130 | −1.132959 | −1.100631 | −1.066616 | −1.030993 | −.993845 | −.955257 |
| 132 | −1.122708 | −1.087446 | −1.050496 | −1.011945 | −.971883 | −.930402 |
| 134 | −1.110474 | −1.072172 | −1.032187 | −.990613 | −.947549 | −.903094 |
| 136 | −1.096183 | −1.054729 | −1.011602 | −.966907 | −.920749 | −.873237 |
| 138 | −1.079747 | −1.035021 | −.988642 | −.940722 | −.891375 | −.840719 |
| 140 | −1.061063 | −1.012942 | −.963192 | −.911938 | −.859302 | −.805411 |
| 142 | −1.040014 | −.988362 | −.935117 | −.880412 | −.824380 | −.767159 |
| 144 | −1.016459 | −.961132 | −.904257 | −.845976 | −.786434 | −.725780 |
| 146 | −.990233 | −.931075 | −.870422 | −.808430 | −.745256 | −.681057 |
| 148 | −.961139 | −.897977 | −.833386 | −.767536 | −.700594 | −.632730 |
| 150 | −.928937 | −.861580 | −.792875 | −.723002 | −.652142 | −.580480 |
| 152 | −.893336 | −.821571 | −.748552 | −.674473 | −.599530 | −.523920 |
| 154 | −.853976 | −.777561 | −.700003 | −.621509 | −.542293 | −.462565 |
| 156 | −.810406 | −.729064 | −.646706 | −.563559 | −.479851 | −.395808 |
| 158 | −.762052 | −.675457 | −.587997 | −.499917 | −.411461 | −.322873 |
| 160 | −.708169 | −.615936 | −.523014 | −.429666 | −.336157 | −.242749 |
| 162 | −.647767 | −.549430 | −.450609 | −.351589 | −.252655 | −.154091 |
| 164 | −.579499 | −.474479 | −.369216 | −.264020 | −.159199 | −.055057 |
| 166 | −.501459 | −.389020 | −.276624 | −.164608 | −.053305 | .056955 |
| 168 | −.410841 | −.290014 | −.169572 | −.049883 | .068688 | .185787 |
| 170 | −.303275 | −.172722 | −.042974 | .085565 | .212498 | .337435 |
| 172 | −.171401 | −.029170 | .111729 | .250848 | .387748 | .522001 |
| 174 | −.001377 | .155651 | .310650 | .463118 | .612563 | .758507 |
| 176 | .237967 | .415538 | .590080 | .761014 | .927776 | 1.089820 |
| 178 | .646320 | .858587 | 1.066096 | 1.268137 | 1.464022 | 1.653090 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .80 | .82 | .84 | .86 | .88 | .90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 3.184082 | 3.169387 | 3.154894 | 3.140599 | 3.126497 | 3.112582 |
| 4 | 2.486340 | 2.471508 | 2.456878 | 2.442445 | 2.428203 | 2.414147 |
| 6 | 2.074314 | 2.059295 | 2.044477 | 2.029855 | 2.015422 | 2.001174 |
| 8 | 1.778477 | 1.763235 | 1.748192 | 1.733343 | 1.718683 | 1.704206 |
| 10 | 1.545847 | 1.530355 | 1.515061 | 1.499959 | 1.485045 | 1.470314 |
| 12 | 1.352912 | 1.337151 | 1.321587 | 1.306215 | 1.291029 | 1.276026 |
| 14 | 1.187191 | 1.171149 | 1.155303 | 1.139648 | 1.124180 | 1.108893 |
| 16 | 1.041277 | 1.024946 | 1.008812 | .992870 | .977114 | .961540 |
| 18 | .910427 | .893806 | .877383 | .861152 | .845109 | .829249 |
| 20 | .791428 | .774520 | .757812 | .741298 | .724974 | .708834 |
| 22 | .682012 | .664826 | .647841 | .631053 | .614456 | .598048 |
| 24 | .580525 | .563070 | .545821 | .528771 | .511918 | .495255 |
| 26 | .485722 | .468015 | .450517 | .433224 | .416131 | .399235 |
| 28 | .396655 | .378713 | .360987 | .343471 | .326160 | .309052 |
| | | | | | | |
| 30 | .312580 | .294427 | .276495 | .258780 | .241278 | .223984 |
| 32 | .232912 | .214571 | .196460 | .178573 | .160908 | .143460 |
| 34 | .157178 | .138679 | .120418 | .102391 | .084594 | .067024 |
| 36 | .084999 | .066372 | .047993 | .029859 | .011967 | -.005688 |
| 38 | .016063 | -.002657 | -.021118 | -.039322 | -.057274 | -.074976 |
| 40 | -.049885 | -.068664 | -.087169 | -.105405 | -.123374 | -.141081 |
| 42 | -.113059 | -.131856 | -.150366 | -.168592 | -.186536 | -.204202 |
| 44 | -.173634 | -.192409 | -.210881 | -.229052 | -.246925 | -.264504 |
| 46 | -.231759 | -.250468 | -.268855 | -.286925 | -.304680 | -.322123 |
| 48 | -.287555 | -.306152 | -.324409 | -.342329 | -.359916 | -.377170 |
| 50 | -.341128 | -.359565 | -.377642 | -.395361 | -.412727 | -.429740 |
| 52 | -.392563 | -.410790 | -.428636 | -.446102 | -.463193 | -.479909 |
| 54 | -.441935 | -.459900 | -.477461 | -.494619 | -.511379 | -.527741 |
| 56 | -.489303 | -.506953 | -.524174 | -.540969 | -.557340 | -.573288 |
| 58 | -.534721 | -.552000 | -.568825 | -.585197 | -.601120 | -.616595 |
| | | | | | | |
| 60 | -.578229 | -.595081 | -.611452 | -.627343 | -.642757 | -.657696 |
| 62 | -.619865 | -.636232 | -.652088 | -.667436 | -.682279 | -.696619 |
| 64 | -.659657 | -.675478 | -.690759 | -.705503 | -.719712 | -.733389 |
| 66 | -.697630 | -.712844 | -.727488 | -.741564 | -.755074 | -.768022 |
| 68 | -.733801 | -.748347 | -.762290 | -.775634 | -.788381 | -.800533 |
| 70 | -.768188 | -.782002 | -.795180 | -.807725 | -.819642 | -.830932 |
| 72 | -.800801 | -.813818 | -.826165 | -.837847 | -.848866 | -.859227 |
| 74 | -.831649 | -.843803 | -.855254 | -.866005 | -.876060 | -.885423 |
| 76 | -.860737 | -.871963 | -.882450 | -.892203 | -.901225 | -.909521 |
| 78 | -.888069 | -.898300 | -.907756 | -.916442 | -.924363 | -.931524 |
| 80 | -.913647 | -.922815 | -.931172 | -.938723 | -.945473 | -.951431 |
| 82 | -.937470 | -.945506 | -.952695 | -.959042 | -.964554 | -.969238 |
| 84 | -.959534 | -.966371 | -.972323 | -.977397 | -.981602 | -.984944 |
| 86 | -.979838 | -.985406 | -.990051 | -.993784 | -.996612 | -.998544 |
| 88 | -.998375 | -1.002604 | -1.005874 | -1.008196 | -1.009578 | -1.010033 |
| | | | | | | |
| 90 | -1.015138 | -1.017959 | -1.019784 | -1.020626 | -1.020495 | -1.019404 |

122

$$Q_\nu(\cos \theta)$$

| $\nu$ | .80 | .82 | .84 | .86 | .88 | .90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -1.015138 | -1.017959 | -1.019784 | -1.020626 | -1.020496 | -1.019405 |
| 92 | -1.030120 | -1.031463 | -1.031774 | -1.031067 | -1.029355 | -1.026652 |
| 94 | -1.043312 | -1.043106 | -1.041834 | -1.039510 | -1.036149 | -1.031768 |
| 96 | -1.054703 | -1.052879 | -1.049954 | -1.045945 | -1.040869 | -1.034743 |
| 98 | -1.064282 | -1.060769 | -1.056122 | -1.050361 | -1.043503 | -1.035570 |
| 100 | -1.072036 | -1.066764 | -1.060327 | -1.052746 | -1.044042 | -1.034238 |
| 102 | -1.077951 | -1.070851 | -1.062555 | -1.053088 | -1.042473 | -1.030736 |
| 104 | -1.082011 | -1.073013 | -1.062791 | -1.051372 | -1.038783 | -1.025052 |
| 106 | -1.084200 | -1.073234 | -1.061019 | -1.047583 | -1.032958 | -1.017173 |
| 108 | -1.084499 | -1.071496 | -1.057220 | -1.041704 | -1.024980 | -1.007084 |
| 110 | -1.082887 | -1.067778 | -1.051375 | -1.033715 | -1.014834 | -.994771 |
| 112 | -1.079343 | -1.062059 | -1.043463 | -1.023597 | -1.002499 | -.980213 |
| 114 | -1.073841 | -1.054313 | -1.033460 | -1.011325 | -.987954 | -.963392 |
| 116 | -1.066353 | -1.044513 | -1.021338 | -.996874 | -.971173 | -.944285 |
| 118 | -1.056850 | -1.032630 | -1.007067 | -.980216 | -.952130 | -.922864 |
| | | | | | | |
| 120 | -1.045297 | -1.018628 | -.990615 | -.961316 | -.930792 | -.899101 |
| 122 | -1.031655 | -1.002469 | -.971943 | -.940139 | -.907124 | -.872962 |
| 124 | -1.015883 | -.984111 | -.951008 | -.916642 | -.881085 | -.844407 |
| 126 | -.997930 | -.963504 | -.927761 | -.890777 | -.852627 | -.813390 |
| 128 | -.977743 | -.940593 | -.902148 | -.862489 | -.821698 | -.779860 |
| 130 | -.955257 | -.915314 | -.874103 | -.831713 | -.788233 | -.743755 |
| 132 | -.930402 | -.887594 | -.843553 | -.798377 | -.752161 | -.705003 |
| 134 | -.903094 | -.857348 | -.810414 | -.762395 | -.713396 | -.663521 |
| 136 | -.873237 | -.824478 | -.774584 | -.723667 | -.671837 | -.619210 |
| 138 | -.840719 | -.788871 | -.735949 | -.682075 | -.627369 | -.571952 |
| 140 | -.805411 | -.750392 | -.694373 | -.637483 | -.579852 | -.521609 |
| 142 | -.767159 | -.708884 | -.649693 | -.589726 | -.529121 | -.468016 |
| 144 | -.725780 | -.664158 | -.601718 | -.538609 | -.474978 | -.410975 |
| 146 | -.681057 | -.615992 | -.550219 | -.483898 | -.417188 | -.350247 |
| 148 | -.632730 | -.564114 | -.494917 | -.425310 | -.355461 | -.285540 |
| | | | | | | |
| 150 | -.580480 | -.508197 | -.435476 | -.362499 | -.289446 | -.216499 |
| 152 | -.523920 | -.447837 | -.371479 | -.295039 | -.218711 | -.142685 |
| 154 | -.462565 | -.382534 | -.302410 | -.222401 | -.142712 | -.063547 |
| 156 | -.395808 | -.311655 | -.227617 | -.143915 | -.060767 | .021608 |
| 158 | -.322873 | -.234395 | -.146266 | -.058723 | .028000 | .113676 |
| 160 | -.242749 | -.149701 | -.057269 | .034293 | .124738 | .213823 |
| 162 | -.154091 | -.056173 | .040822 | .136627 | .230975 | .323609 |
| 164 | -.055057 | .048106 | .149997 | .250325 | .348810 | .445176 |
| 166 | .056955 | .165850 | .273063 | .378285 | .481214 | .581558 |
| 168 | .185787 | .301063 | .414174 | .524788 | .632582 | .737246 |
| 170 | .337435 | .459997 | .579813 | .696524 | .809783 | .919258 |
| 172 | .522001 | .653190 | .780910 | .904772 | 1.024399 | 1.139434 |
| 174 | .758507 | .900487 | 1.038057 | 1.170786 | 1.298264 | 1.420101 |
| 176 | 1.089820 | 1.246618 | 1.397666 | 1.542481 | 1.680602 | 1.811599 |
| 178 | 1.653090 | 1.834709 | 2.008274 | 2.173212 | 2.328986 | 2.475092 |
| | | | | | | |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .90 | .92 | .94 | .96 | .98 | 1.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 3.112582 | 3.098851 | 3.085297 | 3.071916 | 3.058705 | 3.045660 |
| 4 | 2.414147 | 2.400273 | 2.386576 | 2.373051 | 2.359694 | 2.346502 |
| 6 | 2.001174 | 1.987106 | 1.973214 | 1.959493 | 1.945939 | 1.932547 |
| 8 | 1.704206 | 1.689909 | 1.675785 | 1.661831 | 1.648043 | 1.634416 |
| 10 | 1.470314 | 1.455760 | 1.441380 | 1.427168 | 1.413120 | 1.399234 |
| 12 | 1.276026 | 1.261199 | 1.246544 | 1.232058 | 1.217736 | 1.203573 |
| 14 | 1.108893 | 1.093783 | 1.078845 | 1.064076 | 1.049470 | 1.035024 |
| 16 | .961540 | .946143 | .930919 | .915864 | .900973 | .886242 |
| 18 | .829249 | .813568 | .798060 | .782722 | .767550 | .752540 |
| 20 | .708834 | .692875 | .677091 | .661480 | .646036 | .630757 |
| 22 | .598048 | .581822 | .565776 | .549904 | .534203 | .518670 |
| 24 | .495255 | .478780 | .462487 | .446373 | .430435 | .414668 |
| 26 | .399235 | .382529 | .366012 | .349679 | .333525 | .317549 |
| 28 | .309052 | .292141 | .275425 | .258898 | .242558 | .226401 |
| | | | | | | |
| 30 | .223984 | .206896 | .190008 | .173319 | .156823 | .140519 |
| 32 | .143460 | .126225 | .109199 | .092380 | .075764 | .059348 |
| 34 | .067024 | .049677 | .032549 | .015638 | -.001060 | -.017548 |
| 36 | -.005688 | -.023110 | -.040301 | -.057264 | -.074004 | -.090521 |
| 38 | -.074976 | -.092431 | -.109644 | -.126617 | -.143352 | -.159853 |
| 40 | -.141081 | -.158527 | -.175717 | -.192652 | -.209336 | -.225771 |
| 42 | -.204202 | -.221593 | -.238712 | -.255562 | -.272145 | -.288463 |
| 44 | -.264504 | -.281792 | -.298791 | -.315504 | -.331932 | -.348080 |
| 46 | -.322123 | -.339256 | -.356083 | -.372605 | -.388825 | -.404745 |
| 48 | -.377170 | -.394097 | -.410697 | -.426973 | -.442927 | -.458561 |
| 50 | -.429740 | -.446404 | -.462721 | -.478693 | -.494322 | -.509611 |
| 52 | -.479909 | -.496254 | -.512230 | -.527838 | -.543082 | -.557962 |
| 54 | -.527741 | -.543708 | -.559283 | -.574467 | -.589262 | -.603670 |
| 56 | -.573288 | -.588818 | -.603929 | -.618626 | -.632909 | -.646781 |
| 58 | -.616595 | -.631624 | -.646211 | -.660356 | -.674061 | -.687330 |
| | | | | | | |
| 60 | -.657696 | -.672162 | -.686158 | -.699687 | -.712748 | -.725346 |
| 62 | -.696619 | -.710459 | -.723800 | -.736644 | -.748995 | -.760854 |
| 64 | -.733389 | -.746536 | -.759155 | -.771249 | -.782820 | -.793872 |
| 66 | -.768022 | -.780410 | -.792240 | -.803516 | -.814239 | -.824413 |
| 68 | -.800533 | -.812095 | -.823068 | -.833457 | -.843263 | -.852490 |
| 70 | -.830932 | -.841600 | -.851649 | -.861081 | -.869900 | -.878111 |
| 72 | -.859227 | -.868933 | -.877987 | -.886394 | -.894157 | -.901281 |
| 74 | -.885423 | -.894098 | -.902089 | -.909401 | -.916039 | -.922007 |
| 76 | -.909521 | -.917097 | -.923956 | -.930104 | -.935547 | -.940290 |
| 78 | -.931524 | -.937931 | -.943589 | -.948505 | -.952684 | -.956133 |
| 80 | -.951431 | -.956600 | -.960988 | -.964603 | -.967450 | -.969537 |
| 82 | -.969238 | -.973102 | -.976152 | -.978397 | -.979845 | -.980504 |
| 84 | -.984944 | -.987433 | -.989078 | -.989886 | -.989868 | -.989033 |
| 86 | -.998544 | -.999591 | -.999762 | -.999068 | -.997518 | -.995126 |
| 88 | -1.010033 | -1.009570 | -1.008202 | -1.005939 | -1.002795 | -.998781 |
| | | | | | | |
| 90 | -1.019404 | -1.017366 | -1.014392 | -1.010497 | -1.005695 | -1.000000 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | .90 | .92 | .94 | .96 | .98 | 1.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -1.019405 | -1.017366 | -1.014392 | -1.010497 | -1.005695 | -1.000000 |
| 92 | -1.026652 | -1.022971 | -1.018329 | -1.012739 | -1.006217 | -.998781 |
| 94 | -1.031768 | -1.026381 | -1.020006 | -1.012659 | -1.004360 | -.995126 |
| 96 | -1.034743 | -1.027587 | -1.019418 | -1.010255 | -1.000121 | -.989033 |
| 98 | -1.035570 | -1.026581 | -1.016558 | -1.005522 | -.993497 | -.980504 |
| 100 | -1.034238 | -1.023356 | -1.011420 | -.998455 | -.984485 | -.969537 |
| 102 | -1.030736 | -1.017901 | -1.003996 | -.989047 | -.973083 | -.956133 |
| 104 | -1.025052 | -1.010206 | -.994277 | -.977294 | -.959287 | -.940290 |
| 106 | -1.017173 | -1.000261 | -.982254 | -.963187 | -.943093 | -.922007 |
| 108 | -1.007084 | -.988051 | -.967917 | -.946718 | -.924494 | -.901281 |
| 110 | -.994771 | -.973564 | -.951253 | -.927879 | -.903485 | -.878111 |
| 112 | -.980213 | -.956782 | -.932249 | -.906658 | -.880057 | -.852490 |
| 114 | -.963392 | -.937688 | -.910888 | -.883042 | -.854201 | -.824413 |
| 116 | -.944285 | -.916260 | -.887153 | -.857016 | -.825904 | -.793872 |
| 118 | -.922864 | -.892476 | -.861022 | -.828561 | -.795151 | -.760854 |
| | | | | | | |
| 120 | -.899101 | -.866306 | -.832469 | -.797654 | -.761925 | -.725346 |
| 122 | -.872962 | -.837720 | -.801467 | -.764271 | -.726202 | -.687330 |
| 124 | -.844407 | -.806681 | -.767980 | -.728380 | -.687955 | -.646781 |
| 126 | -.813390 | -.773144 | -.731968 | -.689944 | -.647150 | -.603670 |
| 128 | -.779860 | -.737060 | -.693384 | -.648917 | -.603747 | -.557962 |
| 130 | -.743755 | -.698370 | -.652169 | -.605247 | -.557696 | -.509611 |
| 132 | -.705003 | -.657003 | -.608259 | -.558870 | -.508938 | -.458561 |
| 134 | -.663521 | -.612878 | -.561572 | -.509710 | -.457399 | -.404745 |
| 136 | -.619210 | -.565897 | -.512014 | -.457674 | -.402992 | -.348080 |
| 138 | -.571952 | -.515946 | -.459472 | -.402653 | -.345610 | -.288463 |
| 140 | -.521609 | -.462886 | -.403811 | -.344514 | -.285125 | -.225771 |
| 142 | -.468016 | -.406552 | -.344867 | -.283097 | -.221381 | -.159853 |
| 144 | -.410975 | -.346748 | -.282443 | -.218208 | -.154186 | -.090521 |
| 146 | -.350247 | -.283232 | -.216301 | -.149609 | -.083307 | -.017548 |
| 148 | -.285540 | -.215714 | -.146150 | -.077011 | -.008458 | .059348 |
| | | | | | | |
| 150 | -.216499 | -.143835 | -.071629 | -.000055 | .070716 | .140519 |
| 152 | -.142685 | -.067150 | .007706 | .081702 | .154659 | .226401 |
| 154 | -.063547 | .014894 | .092414 | .168822 | .243928 | .317549 |
| 156 | .021608 | .103002 | .183205 | .262014 | .339233 | .414668 |
| 158 | .113676 | .198079 | .280990 | .362196 | .441490 | .518670 |
| 160 | .213823 | .301310 | .386967 | .470571 | .551904 | .630757 |
| 162 | .323609 | .414278 | .502736 | .588749 | .672090 | .752540 |
| 164 | .445176 | .539158 | .630498 | .718948 | .804272 | .886242 |
| 166 | .581558 | .679036 | .773376 | .864316 | .951611 | 1.035024 |
| 168 | .737246 | .838479 | .935994 | 1.029519 | 1.118793 | 1.203573 |
| 170 | .919258 | 1.024628 | 1.125590 | 1.221856 | 1.313155 | 1.399234 |
| 172 | 1.139434 | 1.249535 | 1.354377 | 1.453657 | 1.547091 | 1.634416 |
| 174 | 1.420101 | 1.535927 | 1.645396 | 1.748184 | 1.843992 | 1.932547 |
| 176 | 1.811599 | 1.935064 | 2.050619 | 2.157917 | 2.256640 | 2.346502 |
| 178 | 2.475092 | 2.611063 | 2.736473 | 2.850933 | 2.954097 | 3.045660 |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

125

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 3.045660 | 3.032775 | 3.020047 | 3.007473 | 2.995048 | 2.982770 |
| 4 | 2.346502 | 2.333468 | 2.320592 | 2.307867 | 2.295291 | 2.282860 |
| 6 | 1.932547 | 1.919314 | 1.906235 | 1.893308 | 1.880528 | 1.867892 |
| 8 | 1.634416 | 1.620946 | 1.607630 | 1.594464 | 1.581444 | 1.568568 |
| 10 | 1.399234 | 1.385503 | 1.371926 | 1.358497 | 1.345214 | 1.332073 |
| 12 | 1.203573 | 1.189567 | 1.175713 | 1.162007 | 1.148447 | 1.135028 |
| 14 | 1.035024 | 1.020734 | 1.006597 | .992608 | .978765 | .965063 |
| 16 | .886242 | .871669 | .857248 | .842977 | .828852 | .814870 |
| 18 | .752540 | .737688 | .722991 | .708445 | .694046 | .679792 |
| 20 | .630757 | .615638 | .600676 | .585867 | .571209 | .556699 |
| 22 | .518670 | .503300 | .488091 | .473039 | .458141 | .443394 |
| 24 | .414668 | .399069 | .383635 | .368362 | .353248 | .338290 |
| 26 | .317549 | .301747 | .286114 | .270649 | .255348 | .240208 |
| 28 | .226401 | .210425 | .194625 | .178999 | .163545 | .148259 |
| 30 | .140519 | .124402 | .108470 | .092720 | .077150 | .061756 |
| 32 | .059348 | .043128 | .027103 | .011269 | -.004375 | -.019834 |
| 34 | -.017548 | -.033829 | -.049906 | -.065780 | -.081455 | -.096933 |
| 36 | -.090521 | -.106820 | -.122902 | -.138770 | -.154427 | -.169874 |
| 38 | -.159853 | -.176121 | -.192160 | -.207972 | -.223559 | -.238923 |
| 40 | -.225771 | -.241960 | -.257905 | -.273607 | -.289070 | -.304295 |
| 42 | -.288463 | -.304519 | -.320315 | -.335853 | -.351134 | -.366163 |
| 44 | -.348080 | -.363947 | -.379538 | -.394853 | -.409894 | -.424665 |
| 46 | -.404745 | -.420367 | -.435693 | -.450725 | -.465465 | -.479914 |
| 48 | -.458561 | -.473877 | -.488878 | -.503565 | -.517939 | -.532003 |
| 50 | -.509611 | -.524560 | -.539173 | -.553450 | -.567393 | -.581005 |
| 52 | -.557962 | -.572481 | -.586641 | -.600442 | -.613888 | -.626980 |
| 54 | -.603670 | -.617694 | -.631335 | -.644594 | -.657474 | -.669976 |
| 56 | -.646781 | -.660243 | -.673298 | -.685946 | -.698191 | -.710033 |
| 58 | -.687330 | -.700163 | -.712563 | -.724532 | -.736071 | -.747182 |
| 60 | -.725346 | -.737482 | -.749159 | -.760377 | -.771140 | -.781449 |
| 62 | -.760854 | -.772224 | -.783107 | -.793504 | -.803420 | -.812855 |
| 64 | -.793872 | -.804406 | -.814424 | -.823930 | -.832927 | -.841415 |
| 66 | -.824413 | -.834041 | -.843125 | -.851669 | -.859675 | -.867146 |
| 68 | -.852490 | -.861142 | -.869221 | -.876731 | -.883675 | -.890057 |
| 70 | -.878111 | -.885716 | -.892720 | -.899125 | -.904937 | -.910160 |
| 72 | -.901281 | -.907770 | -.913628 | -.918860 | -.923470 | -.927463 |
| 74 | -.922007 | -.927310 | -.931953 | -.935941 | -.939280 | -.941976 |
| 76 | -.940290 | -.944338 | -.947697 | -.950374 | -.952375 | -.953705 |
| 78 | -.956133 | -.958858 | -.960866 | -.962164 | -.962760 | -.962661 |
| 80 | -.969537 | -.970872 | -.971463 | -.971317 | -.970443 | -.968851 |
| 82 | -.980504 | -.980383 | -.979491 | -.977837 | -.975432 | -.972284 |
| 84 | -.989033 | -.987392 | -.984954 | -.981730 | -.977732 | -.972970 |
| 86 | -.995126 | -.991901 | -.987855 | -.983002 | -.977353 | -.970921 |
| 88 | -.998781 | -.993911 | -.988199 | -.981659 | -.974303 | -.966148 |
| 90 | -1.000000 | -.993427 | -.985990 | -.977706 | -.968591 | -.958662 |

$$Q_\nu(\cos\theta)$$

| $\nu$ $\theta$ | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 |
|---|---|---|---|---|---|---|
| 90 | -1.000000 | -.993427 | -.985990 | -.977706 | -.968591 | -.958662 |
| 92 | -.998781 | -.990447 | -.981231 | -.971152 | -.960228 | -.948478 |
| 94 | -.995126 | -.984975 | -.973928 | -.962005 | -.949225 | -.935610 |
| 96 | -.989033 | -.977015 | -.964087 | -.950273 | -.935594 | -.920074 |
| 98 | -.980504 | -.966568 | -.951713 | -.935964 | -.919347 | -.901887 |
| 100 | -.969537 | -.953637 | -.936812 | -.919089 | -.900498 | -.881066 |
| 102 | -.956133 | -.938225 | -.919389 | -.899657 | -.879060 | -.857628 |
| 104 | -.940290 | -.920333 | -.899452 | -.877678 | -.855047 | -.831593 |
| 106 | -.922007 | -.899965 | -.877004 | -.853161 | -.828474 | -.802980 |
| 108 | -.901281 | -.877121 | -.852052 | -.826116 | -.799354 | -.771808 |
| 110 | -.878111 | -.851802 | -.824600 | -.796552 | -.767701 | -.738095 |
| 112 | -.852490 | -.824006 | -.794652 | -.764477 | -.733529 | -.701859 |
| 114 | -.824413 | -.793732 | -.762209 | -.729897 | -.696850 | -.663120 |
| 116 | -.793872 | -.760976 | -.727273 | -.692819 | -.657673 | -.621893 |
| 118 | -.760854 | -.725730 | -.689839 | -.653245 | -.616008 | -.578192 |
| 120 | -.725346 | -.687984 | -.649905 | -.611174 | -.571860 | -.532029 |
| 122 | -.687330 | -.647725 | -.607459 | -.566604 | -.525231 | -.483413 |
| 124 | -.646781 | -.604934 | -.562490 | -.519527 | -.476121 | -.432350 |
| 126 | -.603670 | -.559585 | -.514977 | -.469928 | -.424521 | -.378837 |
| 128 | -.557962 | -.511649 | -.464895 | -.417789 | -.370418 | -.322870 |
| 130 | -.509611 | -.461084 | -.412209 | -.363080 | -.313791 | -.264433 |
| 132 | -.458561 | -.407840 | -.356875 | -.305764 | -.254608 | -.203503 |
| 134 | -.404745 | -.351855 | -.298835 | -.245791 | -.192826 | -.140044 |
| 136 | -.348080 | -.293051 | -.238019 | -.183095 | -.128388 | -.074008 |
| 138 | -.288463 | -.231332 | -.174336 | -.117593 | -.061218 | -.005327 |
| 140 | -.225771 | -.166579 | -.107675 | -.049181 | .008778 | .066085 |
| 142 | -.159853 | -.098647 | -.037895 | .022271 | .081726 | .140344 |
| 144 | -.090521 | -.027354 | .035175 | .096932 | .157782 | .217595 |
| 146 | -.017548 | .047520 | .111752 | .175006 | .237141 | .298023 |
| 148 | .059348 | .126253 | .192104 | .256752 | .320053 | .381866 |
| 150 | .140519 | .209189 | .276567 | .342498 | .406833 | .469426 |
| 152 | .226401 | .296758 | .365562 | .432655 | .497879 | .561086 |
| 154 | .317549 | .389507 | .459628 | .527747 | .593702 | .657342 |
| 156 | .414668 | .488134 | .559451 | .628449 | .694961 | .758831 |
| 158 | .518670 | .593544 | .665925 | .735638 | .802512 | .866388 |
| 160 | .630757 | .706929 | .780229 | .850475 | .917494 | .981124 |
| 162 | .752540 | .829892 | .903949 | .974523 | 1.041440 | 1.104537 |
| 164 | .886242 | .964645 | 1.039276 | 1.109946 | 1.176476 | 1.238705 |
| 166 | 1.035024 | 1.114334 | 1.189332 | 1.259825 | 1.325635 | 1.386598 |
| 168 | 1.203573 | 1.283631 | 1.358752 | 1.428744 | 1.493425 | 1.552637 |
| 170 | 1.399234 | 1.479857 | 1.554808 | 1.623892 | 1.686930 | 1.743767 |
| 172 | 1.634416 | 1.715390 | 1.789794 | 1.857433 | 1.918133 | 1.971745 |
| 174 | 1.932547 | 2.013601 | 2.086933 | 2.152350 | 2.209685 | 2.258803 |
| 176 | 2.346502 | 2.427247 | 2.498657 | 2.560543 | 2.612753 | 2.655166 |
| 178 | 3.045660 | 3.125359 | 3.192978 | 3.248344 | 3.291327 | 3.321844 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.10 | 1.12 | 1.14 | 1.16 | 1.18 | 1.20 |
|-----|------|------|------|------|------|------|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.982770 | 2.970634 | 2.958639 | 2.946780 | 2.935054 | 2.923459 |
| 4 | 2.282860 | 2.270571 | 2.258421 | 2.246406 | 2.234523 | 2.222771 |
| 6 | 1.867892 | 1.855396 | 1.843038 | 1.830815 | 1.818722 | 1.806758 |
| 8 | 1.568568 | 1.555830 | 1.543229 | 1.530761 | 1.518424 | 1.506213 |
| 10 | 1.332073 | 1.319070 | 1.306203 | 1.293469 | 1.280864 | 1.268386 |
| 12 | 1.135028 | 1.121747 | 1.108602 | 1.095590 | 1.082706 | 1.069949 |
| 14 | .965063 | .951500 | .938073 | .924778 | .911613 | .898576 |
| 16 | .814870 | .801027 | .787322 | .773750 | .760309 | .746996 |
| 18 | .679792 | .665680 | .651706 | .637868 | .624163 | .610588 |
| 20 | .556699 | .542332 | .528107 | .514021 | .500070 | .486252 |
| 22 | .443394 | .428794 | .414340 | .400028 | .385856 | .371821 |
| 24 | .338290 | .323484 | .308828 | .294319 | .279956 | .265735 |
| 26 | .240208 | .225228 | .210402 | .195731 | .181211 | .166839 |
| 28 | .148259 | .133139 | .118181 | .103385 | .088747 | .074266 |
| 30 | .061756 | .046536 | .031488 | .016609 | .001898 | -.012647 |
| 32 | -.019834 | -.035109 | -.050203 | -.065118 | -.079855 | -.094417 |
| 34 | -.096933 | -.112216 | -.127307 | -.142207 | -.156919 | -.171444 |
| 36 | -.169874 | -.185114 | -.200150 | -.214982 | -.229613 | -.244044 |
| 38 | -.238923 | -.254067 | -.268991 | -.283699 | -.298191 | -.312470 |
| 40 | -.304295 | -.319285 | -.334040 | -.348563 | -.362856 | -.376920 |
| 42 | -.366163 | -.380938 | -.395464 | -.409740 | -.423770 | -.437554 |
| 44 | -.424665 | -.439165 | -.453397 | -.467362 | -.481063 | -.494500 |
| 46 | -.479914 | -.494075 | -.507948 | -.521536 | -.534840 | -.547860 |
| 48 | -.532003 | -.545758 | -.559205 | -.572347 | -.585184 | -.597718 |
| 50 | -.581005 | -.594286 | -.607239 | -.619864 | -.632164 | -.644139 |
| 52 | -.626980 | -.639719 | -.652106 | -.664144 | -.675834 | -.687178 |
| 54 | -.669976 | -.682102 | -.693854 | -.705232 | -.716239 | -.726877 |
| 56 | -.710033 | -.721475 | -.732518 | -.743164 | -.753415 | -.763273 |
| 58 | -.747182 | -.757868 | -.768131 | -.777971 | -.787392 | -.796394 |
| 60 | -.781449 | -.791307 | -.800716 | -.809677 | -.818193 | -.826267 |
| 62 | -.812855 | -.821812 | -.830294 | -.838303 | -.845842 | -.852912 |
| 64 | -.841415 | -.849400 | -.856883 | -.863866 | -.870354 | -.876349 |
| 66 | -.867146 | -.874085 | -.880497 | -.886383 | -.891748 | -.896595 |
| 68 | -.890057 | -.895881 | -.901150 | -.905868 | -.910039 | -.913667 |
| 70 | -.910160 | -.914797 | -.918853 | -.922333 | -.925241 | -.927581 |
| 72 | -.927463 | -.930844 | -.933619 | -.935792 | -.937369 | -.938355 |
| 74 | -.941976 | -.944033 | -.945459 | -.946259 | -.946439 | -.946006 |
| 76 | -.953705 | -.954373 | -.954384 | -.953747 | -.952467 | -.950553 |
| 78 | -.962661 | -.961874 | -.960408 | -.958271 | -.955471 | -.952016 |
| 80 | -.968851 | -.966547 | -.963543 | -.959847 | -.955468 | -.950418 |
| 82 | -.972284 | -.968404 | -.963803 | -.958492 | -.952481 | -.945782 |
| 84 | -.972970 | -.967457 | -.961204 | -.954224 | -.946530 | -.938134 |
| 86 | -.970921 | -.963720 | -.955764 | -.947066 | -.937640 | -.927502 |
| 88 | -.966148 | -.957208 | -.947498 | -.937036 | -.925836 | -.913916 |
| 90 | -.958662 | -.947935 | -.936428 | -.924159 | -.911147 | -.897408 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.10 | 1.12 | 1.14 | 1.16 | 1.18 | 1.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.958662 | -.947935 | -.936428 | -.924159 | -.911146 | -.897408 |
| 92 | -.948478 | -.935920 | -.922575 | -.908461 | -.893601 | -.878014 |
| 94 | -.935610 | -.921181 | -.905960 | -.889970 | -.873232 | -.855771 |
| 96 | -.920074 | -.903737 | -.886608 | -.868712 | -.850073 | -.830717 |
| 98 | -.901887 | -.883611 | -.864546 | -.844719 | -.824159 | -.802893 |
| 100 | -.881066 | -.860823 | -.839798 | -.818023 | -.795528 | -.772344 |
| 102 | -.857628 | -.835395 | -.812394 | -.788658 | -.764220 | -.739115 |
| 104 | -.831593 | -.807353 | -.782362 | -.756657 | -.730274 | -.703252 |
| 106 | -.802980 | -.776720 | -.749732 | -.722056 | -.693733 | -.664803 |
| 108 | -.771808 | -.743520 | -.714533 | -.684891 | -.654638 | -.623818 |
| 110 | -.738095 | -.707778 | -.676797 | -.645200 | -.613035 | -.580348 |
| 112 | -.701859 | -.669517 | -.636554 | -.603019 | -.568965 | -.534442 |
| 114 | -.663120 | -.628763 | -.593833 | -.558384 | -.522473 | -.486154 |
| 116 | -.621893 | -.585537 | -.548663 | -.511332 | -.473602 | -.435532 |
| 118 | -.578192 | -.539859 | -.501073 | -.461897 | -.422395 | -.382629 |
| 120 | -.532029 | -.491749 | -.451088 | -.410113 | -.368891 | -.327491 |
| 122 | -.483413 | -.441222 | -.398730 | -.356009 | -.313131 | -.270166 |
| 124 | -.432350 | -.388290 | -.344019 | -.299613 | -.255147 | -.210698 |
| 126 | -.378837 | -.332959 | -.286969 | -.240946 | -.194972 | -.149127 |
| 128 | -.322870 | -.275231 | -.227589 | -.180027 | -.132632 | -.085488 |
| 130 | -.264433 | -.215099 | -.165880 | -.116866 | -.068147 | -.019809 |
| 132 | -.203503 | -.152547 | -.101836 | -.051464 | -.001526 | .047886 |
| 134 | -.140044 | -.087548 | -.035438 | .016185 | .067227 | .117589 |
| 136 | -.074008 | -.020062 | .033344 | .086107 | .138124 | .189297 |
| 138 | -.005327 | .049969 | .104559 | .158335 | .211193 | .263028 |
| 140 | .066085 | .122622 | .178274 | .232928 | .286476 | .338811 |
| 142 | .140344 | .198002 | .254581 | .309966 | .364042 | .416703 |
| 144 | .217595 | .276243 | .333604 | .389558 | .443989 | .496785 |
| 146 | .298023 | .357520 | .415504 | .471852 | .526447 | .579175 |
| 148 | .381866 | .442055 | .500489 | .557043 | .611595 | .664033 |
| 150 | .469426 | .530137 | .588832 | .645383 | .699669 | .751573 |
| 152 | .561086 | .622133 | .680882 | .737204 | .790976 | .842083 |
| 154 | .657342 | .718518 | .777093 | .832936 | .885923 | .935941 |
| 156 | .758831 | .819910 | .878058 | .933144 | .985046 | 1.033650 |
| 158 | .866388 | .927116 | .984555 | 1.038574 | 1.089052 | 1.135881 |
| 160 | .981124 | 1.041214 | 1.097623 | 1.150223 | 1.198896 | 1.243537 |
| 162 | 1.104537 | 1.163661 | 1.218674 | 1.269450 | 1.315876 | 1.357853 |
| 164 | 1.238705 | 1.296480 | 1.349667 | 1.398144 | 1.441805 | 1.480559 |
| 166 | 1.386598 | 1.442568 | 1.493413 | 1.539019 | 1.579287 | 1.614139 |
| 168 | 1.552637 | 1.606237 | 1.654100 | 1.696121 | 1.732214 | 1.762312 |
| 170 | 1.743767 | 1.794267 | 1.838317 | 1.875823 | 1.906716 | 1.930944 |
| 172 | 1.971745 | 2.018145 | 2.057233 | 2.088933 | 2.113194 | 2.129992 |
| 174 | 2.258803 | 2.299593 | 2.331976 | 2.355900 | 2.371344 | 2.378315 |
| 176 | 2.655166 | 2.687700 | 2.710306 | 2.722968 | 2.725709 | 2.718582 |
| 178 | 3.321844 | 3.339856 | 3.345372 | 3.338442 | 3.319163 | 3.287676 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.20 | 1.22 | 1.24 | 1.26 | 1.28 | 1.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.923459 | 2.911992 | 2.900649 | 2.889429 | 2.878328 | 2.867345 |
| 4 | 2.222771 | 2.211144 | 2.199641 | 2.188260 | 2.176997 | 2.165850 |
| 6 | 1.806758 | 1.794919 | 1.783203 | 1.771607 | 1.760129 | 1.748765 |
| 8 | 1.506213 | 1.494128 | 1.482163 | 1.470318 | 1.458590 | 1.446976 |
| 10 | 1.268386 | 1.256032 | 1.243799 | 1.231684 | 1.219686 | 1.207801 |
| 12 | 1.069949 | 1.057316 | 1.044804 | 1.032410 | 1.020133 | 1.007969 |
| 14 | .898576 | .885662 | .872870 | .860197 | .847641 | .835199 |
| 16 | .746996 | .733808 | .720744 | .707800 | .694974 | .682264 |
| 18 | .610588 | .597141 | .583819 | .570619 | .557540 | .544579 |
| 20 | .486252 | .472565 | .459007 | .445574 | .432265 | .419078 |
| 22 | .371821 | .357921 | .344154 | .330516 | .317007 | .303624 |
| 24 | .265735 | .251653 | .237710 | .223902 | .210228 | .196685 |
| 26 | .166839 | .152614 | .138533 | .124594 | .110796 | .097135 |
| 28 | .074266 | .059938 | .045763 | .031738 | .017860 | .004129 |
| 30 | -.012647 | -.027031 | -.041253 | -.055316 | -.069222 | -.082972 |
| 32 | -.094417 | -.108806 | -.123023 | -.137071 | -.150951 | -.164665 |
| 34 | -.171444 | -.185784 | -.199941 | -.213917 | -.227713 | -.241331 |
| 36 | -.244044 | -.258278 | -.272316 | -.286160 | -.299810 | -.313270 |
| 38 | -.312470 | -.326537 | -.340393 | -.354041 | -.367482 | -.380716 |
| 40 | -.376920 | -.390756 | -.404366 | -.417753 | -.430915 | -.443857 |
| 42 | -.437554 | -.451093 | -.464390 | -.477446 | -.490261 | -.502838 |
| 44 | -.494500 | -.507674 | -.520588 | -.533243 | -.545639 | -.557778 |
| 46 | -.547860 | -.560600 | -.573059 | -.585240 | -.597143 | -.608771 |
| 48 | -.597718 | -.609950 | -.621883 | -.633516 | -.644851 | -.655891 |
| 50 | -.644139 | -.655792 | -.667123 | -.678133 | -.688825 | -.699199 |
| 52 | -.687178 | -.698176 | -.708831 | -.719143 | -.729115 | -.738747 |
| 54 | -.726877 | -.737146 | -.747049 | -.756587 | -.765762 | -.774575 |
| 56 | -.763273 | -.772738 | -.781814 | -.790501 | -.798802 | -.806719 |
| 58 | -.796394 | -.804981 | -.813154 | -.820915 | -.828266 | -.835210 |
| 60 | -.826267 | -.833900 | -.841095 | -.847855 | -.854181 | -.860076 |
| 62 | -.852912 | -.859518 | -.865661 | -.871345 | -.876571 | -.881343 |
| 64 | -.876349 | -.881854 | -.886872 | -.891407 | -.895461 | -.899039 |
| 66 | -.896595 | -.900928 | -.904749 | -.908064 | -.910875 | -.913188 |
| 68 | -.913667 | -.916757 | -.919312 | -.921338 | -.922838 | -.923818 |
| 70 | -.927581 | -.929360 | -.930581 | -.931251 | -.931374 | -.930957 |
| 72 | -.938355 | -.938757 | -.938579 | -.937829 | -.936512 | -.934635 |
| 74 | -.946006 | -.944967 | -.943328 | -.941097 | -.938281 | -.934887 |
| 76 | -.950553 | -.948013 | -.944854 | -.941084 | -.936713 | -.931748 |
| 78 | -.952016 | -.947917 | -.943182 | -.937820 | -.931842 | -.925256 |
| 80 | -.950418 | -.944706 | -.938343 | -.931339 | -.923706 | -.915455 |
| 82 | -.945782 | -.938407 | -.930368 | -.921677 | -.912346 | -.902388 |
| 84 | -.938134 | -.929050 | -.919291 | -.908871 | -.897805 | -.886107 |
| 86 | -.927502 | -.916666 | -.905149 | -.892965 | -.880131 | -.866663 |
| 88 | -.913916 | -.901292 | -.887982 | -.874003 | -.859374 | -.844113 |
| 90 | -.897408 | -.882964 | -.867833 | -.852035 | -.835589 | -.818517 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.20 | 1.22 | 1.24 | 1.26 | 1.28 | 1.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.897408 | -.882964 | -.867833 | -.852034 | -.835589 | -.818517 |
| 92 | -.878014 | -.861722 | -.844747 | -.827109 | -.808833 | -.789940 |
| 94 | -.855771 | -.837609 | -.818772 | -.799283 | -.779167 | -.758448 |
| 96 | -.830717 | -.810670 | -.789959 | -.768611 | -.746654 | -.724113 |
| 98 | -.802893 | -.780951 | -.758363 | -.735156 | -.711361 | -.687009 |
| 100 | -.772344 | -.748503 | -.724037 | -.698979 | -.673360 | -.647214 |
| 102 | -.739115 | -.713378 | -.687043 | -.660146 | -.632722 | -.604808 |
| 104 | -.703252 | -.675627 | -.647439 | -.618725 | -.589524 | -.559875 |
| 106 | -.664803 | -.635308 | -.605288 | -.574785 | -.543842 | -.512500 |
| 108 | -.623818 | -.592475 | -.560654 | -.528400 | -.495757 | -.462772 |
| 110 | -.580348 | -.547188 | -.513603 | -.479641 | -.445351 | -.410782 |
| 112 | -.534442 | -.499504 | -.464200 | -.428584 | -.392707 | -.356620 |
| 114 | -.486154 | -.449482 | -.412514 | -.375304 | -.337908 | -.300381 |
| 116 | -.435532 | -.397182 | -.358611 | -.319877 | -.281040 | -.242157 |
| 118 | -.382629 | -.342662 | -.302558 | -.262379 | -.222187 | -.182044 |
| | | | | | | |
| 120 | -.327491 | -.285979 | -.244421 | -.202884 | -.161433 | -.120134 |
| 122 | -.270166 | -.227187 | -.184264 | -.141466 | -.098863 | -.056522 |
| 124 | -.210698 | -.166341 | -.122150 | -.078197 | -.034556 | .008701 |
| 126 | -.149127 | -.103489 | -.058136 | -.013146 | .031406 | .075447 |
| 128 | -.085488 | -.038676 | .007720 | .053623 | .098952 | .143631 |
| 130 | -.019809 | .028058 | .075373 | .122050 | .168009 | .213169 |
| 132 | .047886 | .096684 | .144778 | .192083 | .238513 | .283988 |
| 134 | .117589 | .167178 | .215904 | .263676 | .310409 | .356018 |
| 136 | .189297 | .239529 | .288725 | .336794 | .383647 | .429199 |
| 138 | .263028 | .313740 | .363234 | .411415 | .458194 | .503484 |
| 140 | .338811 | .389831 | .439436 | .487533 | .534028 | .578836 |
| 142 | .416703 | .467842 | .517359 | .565158 | .611147 | .655238 |
| 144 | .496785 | .547841 | .597054 | .644327 | .689569 | .732691 |
| 146 | .579175 | .629928 | .678604 | .725105 | .769341 | .811225 |
| 148 | .664033 | .714246 | .762132 | .807595 | .850545 | .890900 |
| | | | | | | |
| 150 | .751573 | .800987 | .847810 | .891946 | .933309 | .971817 |
| 152 | .842083 | .890415 | .935875 | .978369 | 1.017813 | 1.054133 |
| 154 | .935941 | .982881 | 1.026648 | 1.067153 | 1.104317 | 1.138070 |
| 156 | 1.033650 | 1.078853 | 1.120562 | 1.158694 | 1.193175 | 1.223942 |
| 158 | 1.135881 | 1.178959 | 1.218201 | 1.253528 | 1.284875 | 1.312189 |
| 160 | 1.243537 | 1.284051 | 1.320359 | 1.352391 | 1.380092 | 1.403417 |
| 162 | 1.357853 | 1.395296 | 1.428130 | 1.456300 | 1.479760 | 1.498479 |
| 164 | 1.480559 | 1.514328 | 1.543053 | 1.566688 | 1.585203 | 1.598584 |
| 166 | 1.614139 | 1.643508 | 1.667349 | 1.685632 | 1.698345 | 1.705493 |
| 168 | 1.762312 | 1.786367 | 1.804349 | 1.816250 | 1.822080 | 1.821866 |
| 170 | 1.930944 | 1.948481 | 1.959321 | 1.963478 | 1.960992 | 1.951920 |
| 172 | 2.129992 | 2.139324 | 2.141215 | 2.135713 | 2.122891 | 2.102845 |
| 174 | 2.378315 | 2.376848 | 2.367007 | 2.348884 | 2.322599 | 2.288299 |
| 176 | 2.718582 | 2.701677 | 2.675117 | 2.639058 | 2.593689 | 2.539229 |
| 178 | 3.287676 | 3.244165 | 3.188856 | 3.122018 | 3.043959 | 2.955026 |
| | | | | | | |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

| $\nu$ | 1.30 | 1.32 | 1.34 | 1.36 | 1.38 | 1.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.867345 | 2.856476 | 2.845720 | 2.835073 | 2.824535 | 2.814101 |
| 4 | 2.165850 | 2.154817 | 2.143896 | 2.133083 | 2.122377 | 2.111776 |
| 6 | 1.748765 | 1.737514 | 1.726374 | 1.715341 | 1.704414 | 1.693591 |
| 8 | 1.446976 | 1.435473 | 1.424080 | 1.412795 | 1.401614 | 1.390535 |
| 10 | 1.207801 | 1.196028 | 1.184363 | 1.172805 | 1.161352 | 1.150001 |
| 12 | 1.007969 | .995916 | .983972 | .972136 | .960403 | .948774 |
| 14 | .835199 | .822869 | .810649 | .798537 | .786530 | .774627 |
| 16 | .682264 | .669668 | .657182 | .644807 | .632538 | .620375 |
| 18 | .544579 | .531734 | .519003 | .506384 | .493875 | .481473 |
| 20 | .419078 | .406010 | .393059 | .380224 | .367502 | .354891 |
| 22 | .303624 | .290364 | .277227 | .264209 | .251310 | .238527 |
| 24 | .196685 | .183272 | .169986 | .156827 | .143791 | .130878 |
| 26 | .097135 | .083611 | .070222 | .056966 | .043840 | .030845 |
| 28 | .004129 | -.009456 | -.022900 | -.036202 | -.049365 | -.062390 |
| 30 | -.082972 | -.096568 | -.110012 | -.123305 | -.136449 | -.149445 |
| 32 | -.164665 | -.178214 | -.191600 | -.204824 | -.217889 | -.230794 |
| 34 | -.241331 | -.254772 | -.268038 | -.281130 | -.294050 | -.306798 |
| 36 | -.313270 | -.326539 | -.339619 | -.352512 | -.365220 | -.377742 |
| 38 | -.380716 | -.393746 | -.406573 | -.419197 | -.431620 | -.443844 |
| 40 | -.443857 | -.456577 | -.469078 | -.481362 | -.493428 | -.505278 |
| 42 | -.502838 | -.515177 | -.527280 | -.539147 | -.550780 | -.562181 |
| 44 | -.557778 | -.569662 | -.581291 | -.592666 | -.603789 | -.614660 |
| 46 | -.608771 | -.620123 | -.631201 | -.642006 | -.652540 | -.662804 |
| 48 | -.655891 | -.666635 | -.677084 | -.687242 | -.697107 | -.706683 |
| 50 | -.699199 | -.709258 | -.719001 | -.728431 | -.737548 | -.746354 |
| 52 | -.738747 | -.748041 | -.756999 | -.765622 | -.773912 | -.781869 |
| 54 | -.774575 | -.783028 | -.791122 | -.798859 | -.806242 | -.813270 |
| 56 | -.806719 | -.814252 | -.821405 | -.828179 | -.834576 | -.840597 |
| 58 | -.835210 | -.841748 | -.847882 | -.853615 | -.858949 | -.863887 |
| 60 | -.860076 | -.865542 | -.870583 | -.875200 | -.879397 | -.883176 |
| 62 | -.881343 | -.885665 | -.889538 | -.892966 | -.895952 | -.898500 |
| 64 | -.899039 | -.902143 | -.904777 | -.906945 | -.908651 | -.909898 |
| 66 | -.913188 | -.915005 | -.916332 | -.917172 | -.917530 | -.917410 |
| 68 | -.923818 | -.924282 | -.924235 | -.923682 | -.922629 | -.921080 |
| 70 | -.930957 | -.930003 | -.928521 | -.926514 | -.923990 | -.920955 |
| 72 | -.934635 | -.932205 | -.929228 | -.925710 | -.921660 | -.917085 |
| 74 | -.934887 | -.930923 | -.926397 | -.921316 | -.915690 | -.909525 |
| 76 | -.931748 | -.926198 | -.920073 | -.913381 | -.906133 | -.898337 |
| 78 | -.925256 | -.918073 | -.910304 | -.901959 | -.893049 | -.883584 |
| 80 | -.915455 | -.906596 | -.897144 | -.887108 | -.876501 | -.865336 |
| 82 | -.902388 | -.891818 | -.880646 | -.868889 | -.856558 | -.843669 |
| 84 | -.886107 | -.873791 | -.860874 | -.847370 | -.833294 | -.818663 |
| 86 | -.866663 | -.852577 | -.837891 | -.822622 | -.806787 | -.790404 |
| 88 | -.844113 | -.828238 | -.811768 | -.794722 | -.777120 | -.758981 |
| 90 | -.818517 | -.800839 | -.782577 | -.763750 | -.744382 | -.724493 |

| $\nu$ | 1.30 | 1.32 | 1.34 | 1.36 | 1.38 | 1.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.818517 | -.800839 | -.782576 | -.763750 | -.744381 | -.724492 |
| 92 | -.789940 | -.770453 | -.750395 | -.729791 | -.708664 | -.687037 |
| 94 | -.758448 | -.737153 | -.715307 | -.692936 | -.670066 | -.646723 |
| 96 | -.724113 | -.701018 | -.677397 | -.653278 | -.628689 | -.603660 |
| 98 | -.687009 | -.662130 | -.636755 | -.610914 | -.584640 | -.557962 |
| 100 | -.647214 | -.620574 | -.593475 | -.565948 | -.538028 | -.509750 |
| 102 | -.604808 | -.576439 | -.547652 | -.518484 | -.488970 | -.459147 |
| 104 | -.559875 | -.529817 | -.499389 | -.468631 | -.437582 | -.406281 |
| 106 | -.512500 | -.480801 | -.448788 | -.416502 | -.383986 | -.351282 |
| 108 | -.462772 | -.429489 | -.395954 | -.362211 | -.328306 | -.294284 |
| 110 | -.410782 | -.375981 | -.340996 | -.305877 | -.270671 | -.235425 |
| 112 | -.356620 | -.320375 | -.284024 | -.247618 | -.211207 | -.174842 |
| 114 | -.300381 | -.262777 | -.225151 | -.187557 | -.150048 | -.112679 |
| 116 | -.242157 | -.203287 | -.164487 | -.125815 | -.087326 | -.049076 |
| 118 | -.182044 | -.142010 | -.102148 | -.062516 | -.023173 | .015821 |
| 120 | -.120134 | -.079051 | -.038247 | .002215 | .042274 | .081870 |
| 122 | -.056522 | -.014511 | .027102 | .068256 | .108884 | .148925 |
| 124 | .008701 | .051506 | .093790 | .135484 | .176523 | .216843 |
| 126 | .075447 | .118904 | .161704 | .203779 | .245060 | .285482 |
| 128 | .143631 | .187584 | .230738 | .273021 | .314365 | .354701 |
| 130 | .213169 | .257454 | .300787 | .343097 | .384311 | .424363 |
| 132 | .283988 | .328427 | .371754 | .413895 | .454777 | .494333 |
| 134 | .356018 | .400423 | .443545 | .485309 | .525645 | .564482 |
| 136 | .429199 | .473368 | .516075 | .557244 | .596804 | .634687 |
| 138 | .503484 | .547201 | .589268 | .629608 | .668152 | .704832 |
| 140 | .578836 | .621873 | .663060 | .702324 | .739595 | .774809 |
| 142 | .655238 | .697349 | .737402 | .775326 | .811053 | .844521 |
| 144 | .732691 | .773615 | .812262 | .848565 | .882458 | .913884 |
| 146 | .811225 | .850679 | .887630 | .922011 | .953762 | .982830 |
| 148 | .890900 | .928582 | .963523 | .995660 | 1.024938 | 1.051311 |
| 150 | .971817 | 1.007400 | 1.039993 | 1.069539 | 1.095988 | 1.119302 |
| 152 | 1.054133 | 1.087260 | 1.117137 | 1.143713 | 1.166948 | 1.186810 |
| 154 | 1.138070 | 1.168350 | 1.195108 | 1.218302 | 1.237900 | 1.253880 |
| 156 | 1.223942 | 1.250944 | 1.274137 | 1.293491 | 1.308985 | 1.320608 |
| 158 | 1.312189 | 1.335426 | 1.354555 | 1.369557 | 1.380424 | 1.387159 |
| 160 | 1.403417 | 1.422337 | 1.436834 | 1.446901 | 1.452547 | 1.453791 |
| 162 | 1.498479 | 1.512442 | 1.521647 | 1.526104 | 1.525839 | 1.520891 |
| 164 | 1.598584 | 1.606831 | 1.609961 | 1.608007 | 1.601013 | 1.589041 |
| 166 | 1.705493 | 1.707099 | 1.703200 | 1.693852 | 1.679128 | 1.659116 |
| 168 | 1.821866 | 1.815657 | 1.803519 | 1.785536 | 1.761811 | 1.732463 |
| 170 | 1.951920 | 1.936341 | 1.914355 | 1.886083 | 1.851663 | 1.811255 |
| 172 | 2.102845 | 2.075694 | 2.041582 | 2.000673 | 1.953153 | 1.899230 |
| 174 | 2.288299 | 2.246157 | 2.196373 | 2.139171 | 2.074799 | 2.003528 |
| 176 | 2.539229 | 2.475930 | 2.404074 | 2.323967 | 2.235948 | 2.140379 |
| 178 | 2.955026 | 2.855606 | 2.746121 | 2.627025 | 2.498809 | 2.361992 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

133

$$Q_\nu(\cos\theta)$$

| | 1.40 | 1.42 | 1.44 | 1.46 | 1.48 | 1.50 |
|---|---|---|---|---|---|---|
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.814101 | 2.803772 | 2.793544 | 2.783416 | 2.773385 | 2.763451 |
| 4 | 2.111776 | 2.101277 | 2.090879 | 2.080579 | 2.070376 | 2.060268 |
| 6 | 1.693591 | 1.682869 | 1.672247 | 1.661723 | 1.651294 | 1.640959 |
| 8 | 1.390535 | 1.379558 | 1.368680 | 1.357898 | 1.347211 | 1.336618 |
| 10 | 1.150001 | 1.138750 | 1.127598 | 1.116543 | 1.105582 | 1.094714 |
| 12 | .948774 | .937245 | .925815 | .914482 | .903244 | .892099 |
| 14 | .774627 | .762825 | .751123 | .739519 | .728011 | .716597 |
| 16 | .620375 | .608314 | .596356 | .584497 | .572737 | .561072 |
| 18 | .481473 | .469178 | .456987 | .444898 | .432911 | .421022 |
| 20 | .354891 | .342391 | .329999 | .317713 | .305532 | .293454 |
| 22 | .238527 | .225859 | .213304 | .200860 | .188526 | .176301 |
| 24 | .130878 | .118085 | .105412 | .092856 | .080417 | .068093 |
| 26 | .030845 | .017977 | .005236 | -.007379 | -.019871 | -.032240 |
| 28 | -.062390 | -.075278 | -.088031 | -.100650 | -.113136 | -.125492 |
| 30 | -.149445 | -.162295 | -.174999 | -.187560 | -.199978 | -.212254 |
| 32 | -.230794 | -.243541 | -.256132 | -.268568 | -.280850 | -.292979 |
| 34 | -.306798 | -.319377 | -.331786 | -.344027 | -.356102 | -.368011 |
| 36 | -.377742 | -.390080 | -.402235 | -.414209 | -.426003 | -.437616 |
| 38 | -.443844 | -.455869 | -.467696 | -.479326 | -.490761 | -.502001 |
| 40 | -.505278 | -.516913 | -.528335 | -.539544 | -.550540 | -.561326 |
| 42 | -.562181 | -.573349 | -.584286 | -.594993 | -.605470 | -.615720 |
| 44 | -.614660 | -.625282 | -.635654 | -.645778 | -.655654 | -.665284 |
| 46 | -.662804 | -.672798 | -.682524 | -.691983 | -.701175 | -.710102 |
| 48 | -.706683 | -.715969 | -.724966 | -.733677 | -.742103 | -.750243 |
| 50 | -.746354 | -.754851 | -.763039 | -.770921 | -.778496 | -.785767 |
| 52 | -.781869 | -.789496 | -.796794 | -.803763 | -.810407 | -.816726 |
| 54 | -.813270 | -.819947 | -.826274 | -.832253 | -.837884 | -.843171 |
| 56 | -.840597 | -.846246 | -.851523 | -.856432 | -.860973 | -.865150 |
| 58 | -.863887 | -.868430 | -.872582 | -.876344 | -.879719 | -.882710 |
| 60 | -.883176 | -.886539 | -.889491 | -.892033 | -.894169 | -.895902 |
| 62 | -.898500 | -.900612 | -.902293 | -.903545 | -.904373 | -.904779 |
| 64 | -.909898 | -.910691 | -.911033 | -.910928 | -.910381 | -.909397 |
| 66 | -.917410 | -.916818 | -.915758 | -.914234 | -.912252 | -.909817 |
| 68 | -.921080 | -.919042 | -.916520 | -.913519 | -.910046 | -.906106 |
| 70 | -.920955 | -.917415 | -.913376 | -.908846 | -.903830 | -.898337 |
| 72 | -.917085 | -.911991 | -.906386 | -.900279 | -.893677 | -.886587 |
| 74 | -.909525 | -.902832 | -.895618 | -.887892 | -.879664 | -.870943 |
| 76 | -.898337 | -.890003 | -.881142 | -.871764 | -.861878 | -.851496 |
| 78 | -.883584 | -.873576 | -.863036 | -.851976 | -.840408 | -.828344 |
| 80 | -.865336 | -.853626 | -.841384 | -.828621 | -.815353 | -.801593 |
| 82 | -.843669 | -.830236 | -.816273 | -.801795 | -.786817 | -.771355 |
| 84 | -.818663 | -.803493 | -.787800 | -.771601 | -.754911 | -.737750 |
| 86 | -.790404 | -.773491 | -.756066 | -.738147 | -.719753 | -.700903 |
| 88 | -.758981 | -.740327 | -.721176 | -.701548 | -.681466 | -.660949 |
| 90 | -.724493 | -.704106 | -.683243 | -.661927 | -.640180 | -.618025 |

$$Q_{\nu}(\cos\theta)$$

| $\nu$ | 1.40 | 1.42 | 1.44 | 1.46 | 1.48 | 1.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.724492 | -.704105 | -.683242 | -.661926 | -.640179 | -.618024 |
| 92 | -.687037 | -.664937 | -.642385 | -.619409 | -.596031 | -.572278 |
| 94 | -.646723 | -.622935 | -.598727 | -.574127 | -.549162 | -.523859 |
| 96 | -.603660 | -.578219 | -.552396 | -.526220 | -.499720 | -.472926 |
| 98 | -.557962 | -.530914 | -.503525 | -.475829 | -.447857 | -.419640 |
| 100 | -.509750 | -.481147 | -.452254 | -.423104 | -.393732 | -.364171 |
| 102 | -.459147 | -.429053 | -.398724 | -.368196 | -.337506 | -.306691 |
| 104 | -.406281 | -.374768 | -.343081 | -.311262 | -.279347 | -.247376 |
| 106 | -.351282 | -.318432 | -.285478 | -.252462 | -.219424 | -.186407 |
| 108 | -.294284 | -.260189 | -.226066 | -.191960 | -.157913 | -.123969 |
| 110 | -.235425 | -.200187 | -.165004 | -.129923 | -.094990 | -.060249 |
| 112 | -.174842 | -.138573 | -.102450 | -.066520 | -.030834 | .004562 |
| 114 | -.112679 | -.075500 | -.038565 | -.001924 | .034371 | .070274 |
| 116 | -.049076 | -.011120 | .026486 | .063692 | .100444 | .136692 |
| 118 | .015821 | .054411 | .092541 | .130155 | .167199 | .203621 |
| 120 | .081870 | .120943 | .159435 | .197289 | .234451 | .270866 |
| 122 | .148925 | .188317 | .227001 | .264918 | .302012 | .338229 |
| 124 | .216843 | .256381 | .295075 | .332867 | .369699 | .405517 |
| 126 | .285482 | .324981 | .363494 | .400962 | .437327 | .472534 |
| 128 | .354701 | .393965 | .432095 | .469029 | .504711 | .539086 |
| 130 | .424363 | .463186 | .500718 | .536898 | .571671 | .604982 |
| 132 | .494333 | .532497 | .569206 | .604402 | .638029 | .670033 |
| 134 | .564482 | .601757 | .637407 | .671375 | .703607 | .734052 |
| 136 | .634687 | .670830 | .705172 | .737657 | .768234 | .796855 |
| 138 | .704832 | .739587 | .772358 | .803093 | .831743 | .858264 |
| 140 | .774809 | .807905 | .838830 | .867534 | .893971 | .918103 |
| 142 | .844521 | .875674 | .904461 | .930836 | .954761 | .976202 |
| 144 | .913884 | .942790 | .969131 | .992867 | 1.013964 | 1.032394 |
| 146 | .982830 | 1.009168 | 1.032736 | 1.053501 | 1.071436 | 1.086522 |
| 148 | 1.051311 | 1.074737 | 1.095184 | 1.112626 | 1.127045 | 1.138431 |
| 150 | 1.119302 | 1.139447 | 1.156399 | 1.170141 | 1.180666 | 1.187973 |
| 152 | 1.186810 | 1.203275 | 1.216328 | 1.225965 | 1.232188 | 1.235009 |
| 154 | 1.253880 | 1.266229 | 1.274944 | 1.280033 | 1.281511 | 1.279405 |
| 156 | 1.320608 | 1.328361 | 1.332253 | 1.332308 | 1.328554 | 1.321035 |
| 158 | 1.387159 | 1.389778 | 1.388307 | 1.382783 | 1.373255 | 1.359782 |
| 160 | 1.453791 | 1.450665 | 1.443215 | 1.431496 | 1.415576 | 1.395537 |
| 162 | 1.520891 | 1.511313 | 1.497170 | 1.478540 | 1.455515 | 1.428198 |
| 164 | 1.589041 | 1.572169 | 1.550485 | 1.524094 | 1.493113 | 1.457674 |
| 166 | 1.659116 | 1.633918 | 1.603654 | 1.568459 | 1.528480 | 1.483880 |
| 168 | 1.732463 | 1.697629 | 1.657464 | 1.612135 | 1.561829 | 1.506744 |
| 170 | 1.811255 | 1.765036 | 1.713201 | 1.655962 | 1.593547 | 1.526200 |
| 172 | 1.899230 | 1.839132 | 1.773106 | 1.701417 | 1.624346 | 1.542194 |
| 174 | 2.003528 | 1.925653 | 1.841487 | 1.751365 | 1.655639 | 1.554681 |
| 176 | 2.140379 | 2.037648 | 1.928164 | 1.812362 | 1.690692 | 1.563625 |
| 178 | 2.361992 | 2.217124 | 2.064780 | 1.905560 | 1.740086 | 1.569002 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | 1.570796 |

$$Q_\nu(\cos \theta)$$

| $\nu$ | 1.50 | 1.52 | 1.54 | 1.56 | 1.58 | 1.60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.763450 | 2.753609 | 2.743860 | 2.734202 | 2.724633 | 2.715150 |
| 4 | 2.060268 | 2.050253 | 2.040329 | 2.030495 | 2.020748 | 2.011088 |
| 6 | 1.640960 | 1.630716 | 1.620564 | 1.610500 | 1.600523 | 1.590631 |
| 8 | 1.336618 | 1.326116 | 1.315703 | 1.305379 | 1.295141 | 1.284987 |
| 10 | 1.094715 | 1.083938 | 1.073251 | 1.062651 | 1.052138 | 1.041710 |
| 12 | .892099 | .881046 | .870082 | .859207 | .848419 | .837716 |
| 14 | .716597 | .705277 | .694047 | .682906 | .671854 | .660888 |
| 16 | .561073 | .549503 | .538026 | .526641 | .515347 | .504141 |
| 18 | .421022 | .409232 | .397537 | .385937 | .374431 | .363017 |
| 20 | .293455 | .281479 | .269603 | .257826 | .246147 | .234564 |
| 22 | .176301 | .164183 | .152170 | .140262 | .128456 | .116752 |
| 24 | .068093 | .055882 | .043782 | .031794 | .019915 | .008145 |
| 26 | -.032240 | -.044489 | -.056618 | -.068628 | -.080520 | -.092297 |
| 28 | -.125491 | -.137717 | -.149813 | -.161782 | -.173624 | -.185340 |
| 30 | -.212254 | -.224390 | -.236387 | -.248246 | -.259968 | -.271553 |
| 32 | -.292979 | -.304956 | -.316783 | -.328459 | -.339987 | -.351367 |
| 34 | -.368011 | -.379755 | -.391336 | -.402754 | -.414011 | -.425106 |
| 36 | -.437616 | -.449051 | -.460308 | -.471389 | -.482294 | -.493023 |
| 38 | -.502001 | -.513047 | -.523900 | -.534561 | -.545031 | -.555310 |
| 40 | -.561326 | -.571902 | -.582268 | -.592426 | -.602377 | -.612121 |
| 42 | -.615720 | -.625742 | -.635538 | -.645108 | -.654454 | -.663576 |
| 44 | -.665284 | -.674669 | -.683809 | -.692707 | -.701361 | -.709774 |
| 46 | -.710102 | -.718765 | -.727165 | -.735303 | -.743180 | -.750797 |
| 48 | -.750243 | -.758100 | -.765675 | -.772969 | -.779983 | -.786718 |
| 50 | -.785767 | -.792734 | -.799400 | -.805766 | -.811832 | -.817601 |
| 52 | -.816726 | -.822722 | -.828397 | -.833752 | -.838788 | -.843508 |
| 54 | -.843171 | -.848115 | -.852718 | -.856982 | -.860909 | -.864501 |
| 56 | -.865150 | -.868964 | -.872418 | -.875514 | -.878254 | -.880641 |
| 58 | -.882710 | -.885319 | -.887550 | -.889404 | -.890884 | -.891995 |
| 60 | -.895902 | -.897235 | -.898171 | -.898713 | -.898866 | -.898631 |
| 62 | -.904778 | -.904767 | -.904343 | -.903508 | -.902268 | -.900627 |
| 64 | -.909396 | -.907978 | -.906131 | -.903860 | -.901169 | -.898063 |
| 66 | -.909816 | -.906933 | -.903608 | -.899845 | -.895650 | -.891030 |
| 68 | -.906105 | -.901705 | -.896850 | -.891547 | -.885803 | -.879624 |
| 70 | -.898336 | -.892372 | -.885944 | -.879059 | -.871726 | -.863952 |
| 72 | -.886587 | -.879018 | -.870980 | -.862479 | -.853526 | -.844127 |
| 74 | -.870942 | -.861737 | -.852058 | -.841914 | -.831315 | -.820272 |
| 76 | -.851495 | -.840627 | -.829284 | -.817478 | -.805219 | -.792519 |
| 78 | -.828345 | -.815794 | -.802773 | -.789293 | -.775367 | -.761007 |
| 80 | -.801592 | -.787352 | -.772647 | -.757492 | -.741900 | -.725886 |
| 82 | -.771354 | -.755421 | -.739035 | -.722211 | -.704965 | -.687313 |
| 84 | -.737749 | -.720131 | -.702075 | -.683598 | -.664719 | -.645454 |
| 86 | -.700902 | -.681615 | -.661910 | -.641807 | -.621325 | -.600484 |
| 88 | -.660948 | -.640017 | -.618694 | -.596999 | -.574956 | -.552583 |
| 90 | -.618024 | -.595484 | -.572583 | -.549344 | -.525789 | -.501943 |

| $\nu$ | 1.50 | 1.52 | 1.54 | 1.56 | 1.58 | 1.60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.618024 | -.595484 | -.572583 | -.549344 | -.525789 | -.501943 |
| 92 | -.572277 | -.548173 | -.523744 | -.499015 | -.474011 | -.448759 |
| 94 | -.523858 | -.498245 | -.472348 | -.446196 | -.419815 | -.393234 |
| 96 | -.472925 | -.445867 | -.418573 | -.391074 | -.363400 | -.335579 |
| 98 | -.419640 | -.391211 | -.362602 | -.333844 | -.304969 | -.276008 |
| 100 | -.364171 | -.334457 | -.304623 | -.274704 | -.244732 | -.214741 |
| 102 | -.306690 | -.275787 | -.244830 | -.213858 | -.182904 | -.152005 |
| 104 | -.247376 | -.215388 | -.183421 | -.151514 | -.119704 | -.088028 |
| 106 | -.186407 | -.153451 | -.120597 | -.087885 | -.055354 | -.023043 |
| 108 | -.123969 | -.090172 | -.056563 | -.023185 | .009919 | .042712 |
| 110 | -.060249 | -.025747 | .008471 | .042364 | .075888 | .109000 |
| 112 | .004562 | .039622 | .074298 | .108546 | .142321 | .175580 |
| 114 | .070274 | .105734 | .140704 | .175136 | .208987 | .242210 |
| 116 | .136692 | .172385 | .207474 | .241911 | .275651 | .308648 |
| 118 | .203622 | .239369 | .274394 | .308646 | .342080 | .374648 |
| 120 | .270866 | .306482 | .341248 | .375116 | .408039 | .439970 |
| 122 | .338230 | .373516 | .407821 | .441096 | .473293 | .504369 |
| 124 | .405517 | .440267 | .473898 | .506362 | .537612 | .567604 |
| 126 | .472534 | .506530 | .539265 | .570690 | .600762 | .629436 |
| 128 | .539086 | .572102 | .603708 | .633860 | .662512 | .689626 |
| 130 | .604982 | .636780 | .667018 | .695650 | .722636 | .747937 |
| 132 | .670033 | .700367 | .728984 | .755842 | .780905 | .804135 |
| 134 | .734052 | .762664 | .789400 | .814222 | .837095 | .857989 |
| 136 | .796856 | .823478 | .848062 | .870574 | .890984 | .909266 |
| 138 | .858264 | .882617 | .904769 | .924688 | .942351 | .957740 |
| 140 | .918103 | .939896 | .959321 | .976354 | .990978 | 1.003180 |
| 142 | .976202 | .995130 | 1.011523 | 1.025365 | 1.036645 | 1.045359 |
| 144 | 1.032395 | 1.048139 | 1.061181 | 1.071514 | 1.079134 | 1.084047 |
| 146 | 1.086522 | 1.098747 | 1.108103 | 1.114593 | 1.118224 | 1.119011 |
| 148 | 1.138431 | 1.146780 | 1.152098 | 1.154395 | 1.153691 | 1.150012 |
| 150 | 1.187973 | 1.192070 | 1.192974 | 1.190707 | 1.185302 | 1.176798 |
| 152 | 1.235009 | 1.234449 | 1.230537 | 1.223310 | 1.212814 | 1.199104 |
| 154 | 1.279405 | 1.273749 | 1.264586 | 1.251972 | 1.235966 | 1.216640 |
| 156 | 1.321035 | 1.309801 | 1.294914 | 1.276443 | 1.254470 | 1.229082 |
| 158 | 1.359783 | 1.342435 | 1.321294 | 1.296448 | 1.267999 | 1.236055 |
| 160 | 1.395537 | 1.371469 | 1.343474 | 1.311665 | 1.276165 | 1.237106 |
| 162 | 1.428199 | 1.396706 | 1.361163 | 1.321710 | 1.278493 | 1.231673 |
| 164 | 1.457674 | 1.417919 | 1.374003 | 1.326094 | 1.274370 | 1.219019 |
| 166 | 1.483880 | 1.434834 | 1.381531 | 1.324170 | 1.262962 | 1.198131 |
| 168 | 1.506744 | 1.447093 | 1.383103 | 1.315014 | 1.243074 | 1.167546 |
| 170 | 1.526200 | 1.454180 | 1.377759 | 1.297222 | 1.212865 | 1.124996 |
| 172 | 1.542194 | 1.455274 | 1.363915 | 1.268458 | 1.169256 | 1.066672 |
| 174 | 1.554681 | 1.448876 | 1.338624 | 1.224340 | 1.106449 | .985387 |
| 176 | 1.563626 | 1.431650 | 1.295269 | 1.154995 | 1.011358 | .864891 |
| 178 | 1.569002 | 1.392967 | 1.212656 | 1.028758 | .841969 | .652996 |
| 180 | 1.570796 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$\varrho_\nu(\cos\theta)$$

| $\nu$ | 1.60 | 1.62 | 1.64 | 1.66 | 1.68 | 1.70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.715150 | 2.705753 | 2.696441 | 2.687210 | 2.678061 | 2.668992 |
| 4 | 2.011088 | 2.001513 | 1.992020 | 1.982609 | 1.973278 | 1.964027 |
| 6 | 1.590631 | 1.580823 | 1.571098 | 1.561453 | 1.551888 | 1.542400 |
| 8 | 1.284987 | 1.274917 | 1.264929 | 1.255021 | 1.245191 | 1.235439 |
| 10 | 1.041710 | 1.031364 | 1.021100 | 1.010916 | 1.000812 | .990785 |
| 12 | .837716 | .827096 | .816558 | .806101 | .795724 | .785425 |
| 14 | .660888 | .650007 | .639209 | .628494 | .617860 | .607305 |
| 16 | .504141 | .493022 | .481989 | .471040 | .460175 | .449392 |
| 18 | .363017 | .351693 | .340457 | .329310 | .318250 | .307276 |
| 20 | .234564 | .223076 | .211681 | .200379 | .189168 | .178048 |
| 22 | .116752 | .105149 | .093645 | .082239 | .070929 | .059716 |
| 24 | .008145 | -.003517 | -.015074 | -.026526 | -.037875 | -.049120 |
| 26 | -.092297 | -.103958 | -.115505 | -.126939 | -.138260 | -.149471 |
| 28 | -.185340 | -.196932 | -.208400 | -.219746 | -.230970 | -.242073 |
| 30 | -.271553 | -.283004 | -.294320 | -.305503 | -.316553 | -.327472 |
| 32 | -.351367 | -.362599 | -.373686 | -.384627 | -.395424 | -.406077 |
| 34 | -.425106 | -.436041 | -.446817 | -.457435 | -.467895 | -.478197 |
| 36 | -.493023 | -.503578 | -.513960 | -.524168 | -.534205 | -.544070 |
| 38 | -.555310 | -.565400 | -.575302 | -.585015 | -.594540 | -.603879 |
| 40 | -.612121 | -.621660 | -.630993 | -.640122 | -.649047 | -.657770 |
| 42 | -.663576 | -.672475 | -.681153 | -.689608 | -.697844 | -.705859 |
| 44 | -.709774 | -.717946 | -.725879 | -.733573 | -.741029 | -.748247 |
| 46 | -.750797 | -.758155 | -.765256 | -.772099 | -.778687 | -.785019 |
| 48 | -.786718 | -.793176 | -.799357 | -.805263 | -.810895 | -.816255 |
| 50 | -.817601 | -.823074 | -.828251 | -.833136 | -.837728 | -.842030 |
| 52 | -.843508 | -.847913 | -.852006 | -.855786 | -.859257 | -.862420 |
| 54 | -.864501 | -.867759 | -.870687 | -.873285 | -.875557 | -.877504 |
| 56 | -.880641 | -.882677 | -.884365 | -.885708 | -.886706 | -.887365 |
| 58 | -.891995 | -.892737 | -.893115 | -.893132 | -.892789 | -.892092 |
| 60 | -.898631 | -.898013 | -.897016 | -.895643 | -.893897 | -.891783 |
| 62 | -.900627 | -.898587 | -.896155 | -.893334 | -.890129 | -.886543 |
| 64 | -.898063 | -.894547 | -.890627 | -.886307 | -.881592 | -.876489 |
| 66 | -.891030 | -.885989 | -.880534 | -.874671 | -.868406 | -.861744 |
| 68 | -.879624 | -.873017 | -.865989 | -.858546 | -.850696 | -.842446 |
| 70 | -.863952 | -.855745 | -.847112 | -.838061 | -.828601 | -.818741 |
| 72 | -.844127 | -.834293 | -.824033 | -.813355 | -.802270 | -.790786 |
| 74 | -.820272 | -.808795 | -.796893 | -.784578 | -.771860 | -.758750 |
| 76 | -.792519 | -.779389 | -.765842 | -.751888 | -.737541 | -.722812 |
| 78 | -.761007 | -.746226 | -.731038 | -.715455 | -.699491 | -.683161 |
| 80 | -.725886 | -.709464 | -.692649 | -.675457 | -.657901 | -.639998 |
| 82 | -.687313 | -.669270 | -.650855 | -.632082 | -.612969 | -.593532 |
| 84 | -.645454 | -.625822 | -.605840 | -.585528 | -.564903 | -.543983 |
| 86 | -.600484 | -.579302 | -.557801 | -.536001 | -.513920 | -.491580 |
| 88 | -.552583 | -.529905 | -.506941 | -.483714 | -.460247 | -.436559 |
| 90 | -.501943 | -.477829 | -.453471 | -.428892 | -.404116 | -.379166 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.60 | 1.62 | 1.64 | 1.66 | 1.68 | 1.70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.501943 | -.477829 | -.453471 | -.428892 | -.404116 | -.379166 |
| 92 | -.448759 | -.423283 | -.397609 | -.371762 | -.345768 | -.319653 |
| 94 | -.393234 | -.366480 | -.339580 | -.312562 | -.285452 | -.258279 |
| 96 | -.335579 | -.307641 | -.279617 | -.251533 | -.223421 | -.195309 |
| 98 | -.276008 | -.246993 | -.217955 | -.188925 | -.159935 | -.131013 |
| 100 | -.214741 | -.184765 | -.154838 | -.124990 | -.095256 | -.065667 |
| 102 | -.152005 | -.121196 | -.090511 | -.059986 | -.029654 | .000450 |
| 104 | -.088028 | -.056523 | -.025226 | .005825 | .036599 | .067058 |
| 106 | -.023043 | .009007 | .040762 | .072182 | .103230 | .133872 |
| 108 | .042712 | .075151 | .107199 | .138816 | .169964 | .200606 |
| 110 | .109000 | .141659 | .173825 | .205459 | .236520 | .266973 |
| 112 | .175580 | .208281 | .240382 | .271842 | .302623 | .332687 |
| 114 | .242210 | .274764 | .306606 | .337696 | .367993 | .397462 |
| 116 | .308648 | .340858 | .372239 | .402751 | .432354 | .461011 |
| 118 | .374648 | .406309 | .437019 | .466738 | .495428 | .523052 |
| | | | | | | |
| 120 | .439970 | .470866 | .500686 | .529391 | .556942 | .583304 |
| 122 | .504369 | .534278 | .562983 | .590443 | .616622 | .641488 |
| 124 | .567604 | .596297 | .623651 | .649630 | .674200 | .697330 |
| 126 | .629436 | .656673 | .682437 | .706692 | .729408 | .750556 |
| 128 | .689626 | .715162 | .739088 | .761370 | .781983 | .800900 |
| 130 | .747937 | .771520 | .793353 | .813409 | .831663 | .848096 |
| 132 | .804135 | .825505 | .844985 | .862554 | .878192 | .891883 |
| 134 | .857989 | .876878 | .893739 | .908555 | .921312 | .932001 |
| 136 | .909266 | .925401 | .939370 | .951163 | .960772 | .968195 |
| 138 | .957740 | .970837 | .981636 | .990129 | .996319 | 1.000208 |
| 140 | 1.003180 | 1.012952 | 1.020292 | 1.025205 | 1.027697 | 1.027784 |
| 142 | 1.045359 | 1.051507 | 1.055096 | 1.056139 | 1.054653 | 1.050663 |
| 144 | 1.084047 | 1.086263 | 1.085798 | 1.082676 | 1.076924 | 1.068577 |
| 146 | 1.119011 | 1.116975 | 1.112144 | 1.104551 | 1.094238 | 1.081251 |
| 148 | 1.150012 | 1.143390 | 1.133867 | 1.121490 | 1.106311 | 1.088392 |
| | | | | | | |
| 150 | 1.176798 | 1.165241 | 1.150686 | 1.133195 | 1.112834 | 1.089680 |
| 152 | 1.199104 | 1.182241 | 1.162295 | 1.139342 | 1.113469 | 1.084765 |
| 154 | 1.216640 | 1.194073 | 1.168351 | 1.139569 | 1.107830 | 1.073241 |
| 156 | 1.229082 | 1.200378 | 1.168463 | 1.133452 | 1.095467 | 1.054635 |
| 158 | 1.236055 | 1.200735 | 1.162167 | 1.120487 | 1.075837 | 1.028368 |
| 160 | 1.237106 | 1.194631 | 1.148891 | 1.100045 | 1.048260 | .993712 |
| 162 | 1.231673 | 1.181418 | 1.127905 | 1.071319 | 1.011856 | .949716 |
| 164 | 1.219019 | 1.160238 | 1.098236 | 1.033228 | .965438 | .895096 |
| 166 | 1.198131 | 1.129908 | 1.058534 | .984259 | .907339 | .828038 |
| 168 | 1.167546 | 1.088701 | 1.006818 | .922185 | .835099 | .745859 |
| 170 | 1.124996 | 1.033932 | .939998 | .843528 | .744861 | .644342 |
| 172 | 1.066672 | .961079 | .852860 | .742399 | .630092 | .516334 |
| 174 | .985387 | .861596 | .735529 | .607642 | .478396 | .348252 |
| 176 | .864891 | .716138 | .565648 | .413972 | .261664 | .109276 |
| 178 | .652996 | .462547 | .271336 | .080074 | -.110528 | -.299769 |
| | | | | | | |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.70 | 1.72 | 1.74 | 1.76 | 1.78 | 1.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.668992 | 2.660000 | 2.651085 | 2.642247 | 2.633483 | 2.624791 |
| 4 | 1.964027 | 1.954852 | 1.945754 | 1.936730 | 1.927780 | 1.918902 |
| 6 | 1.542400 | 1.532989 | 1.523654 | 1.514392 | 1.505204 | 1.496086 |
| 8 | 1.235439 | 1.225763 | 1.216162 | 1.206635 | 1.197179 | 1.187795 |
| 10 | .990785 | .980833 | .970957 | .961154 | .951424 | .941764 |
| 12 | .785425 | .775203 | .765056 | .754984 | .744985 | .735057 |
| 14 | .607305 | .596829 | .586430 | .576106 | .565858 | .555683 |
| 16 | .449392 | .438689 | .428067 | .417523 | .407056 | .396665 |
| 18 | .307276 | .296385 | .285578 | .274853 | .264209 | .253645 |
| 20 | .178048 | .167016 | .156072 | .145215 | .134444 | .123758 |
| 22 | .059716 | .048598 | .037573 | .026641 | .015802 | .005053 |
| 24 | -.049120 | -.060263 | -.071305 | -.082247 | -.093090 | -.103835 |
| 26 | -.149471 | -.160571 | -.171561 | -.182443 | -.193217 | -.203885 |
| 28 | -.242073 | -.253056 | -.263920 | -.274665 | -.285293 | -.295805 |
| | | | | | | |
| 30 | -.327472 | -.338259 | -.348917 | -.359445 | -.369845 | -.380117 |
| 32 | -.406077 | -.416587 | -.426955 | -.437181 | -.447266 | -.457211 |
| 34 | -.478197 | -.488344 | -.498335 | -.508171 | -.517853 | -.527381 |
| 36 | -.544070 | -.553765 | -.563290 | -.572646 | -.581833 | -.590852 |
| 38 | -.603879 | -.613033 | -.622001 | -.630784 | -.639384 | -.647800 |
| 40 | -.657770 | -.666291 | -.674610 | -.682729 | -.690647 | -.698367 |
| 42 | -.705859 | -.713656 | -.721235 | -.728597 | -.735742 | -.742672 |
| 44 | -.748247 | -.755230 | -.761977 | -.768490 | -.774770 | -.780818 |
| 46 | -.785019 | -.791098 | -.796925 | -.802500 | -.807824 | -.812899 |
| 48 | -.816255 | -.821343 | -.826161 | -.830711 | -.834993 | -.839008 |
| 50 | -.842030 | -.846043 | -.849769 | -.853209 | -.856365 | -.859238 |
| 52 | -.862420 | -.865277 | -.867830 | -.870081 | -.872031 | -.873684 |
| 54 | -.877504 | -.879129 | -.880433 | -.881420 | -.882091 | -.882449 |
| 56 | -.887365 | -.887685 | -.887671 | -.887324 | -.886648 | -.885645 |
| 58 | -.892092 | -.891043 | -.889645 | -.887901 | -.885816 | -.883392 |
| | | | | | | |
| 60 | -.891783 | -.889304 | -.886465 | -.883269 | -.879720 | -.875823 |
| 62 | -.886543 | -.882583 | -.878251 | -.873554 | -.868496 | -.863082 |
| 64 | -.876489 | -.871001 | -.865135 | -.858897 | -.852291 | -.845324 |
| 66 | -.861744 | -.854693 | -.847259 | -.839447 | -.831266 | -.822721 |
| 68 | -.842446 | -.833803 | -.824775 | -.815369 | -.805593 | -.795455 |
| 70 | -.818741 | -.808488 | -.797850 | -.786838 | -.775458 | -.763721 |
| 72 | -.790786 | -.778913 | -.766661 | -.754040 | -.741059 | -.727729 |
| 74 | -.758750 | -.745258 | -.731396 | -.717175 | -.702606 | -.687700 |
| 76 | -.722812 | -.707713 | -.692256 | -.676456 | -.660322 | -.643870 |
| 78 | -.683161 | -.666477 | -.649453 | -.632103 | -.614442 | -.596483 |
| 80 | -.639998 | -.621761 | -.603208 | -.584353 | -.565211 | -.545799 |
| 82 | -.593532 | -.573788 | -.553755 | -.533448 | -.512886 | -.492085 |
| 84 | -.543983 | -.522788 | -.501335 | -.479644 | -.457733 | -.435620 |
| 86 | -.491580 | -.469001 | -.446202 | -.423204 | -.400028 | -.376693 |
| 88 | -.436559 | -.412675 | -.388615 | -.364401 | -.340055 | -.315600 |
| | | | | | | |
| 90 | -.379166 | -.354067 | -.328842 | -.303514 | -.278107 | -.252644 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.70 | 1.72 | 1.74 | 1.76 | 1.78 | 1.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.379166 | -.354067 | -.328842 | -.303514 | -.278107 | -.252644 |
| 92 | -.319653 | -.293442 | -.267159 | -.240831 | -.214482 | -.188138 |
| 94 | -.258279 | -.231069 | -.203849 | -.176646 | -.149487 | -.122397 |
| 96 | -.195309 | -.167225 | -.139199 | -.111258 | -.083430 | -.055744 |
| 98 | -.131013 | -.102192 | -.073501 | -.044970 | -.016627 | .011497 |
| 100 | -.065667 | -.036255 | -.007052 | .021911 | .050605 | .078999 |
| 102 | .000450 | .030295 | .059847 | .089075 | .117946 | .146431 |
| 104 | .067058 | .097169 | .126897 | .156210 | .185076 | .213463 |
| 106 | .133872 | .164071 | .193793 | .223005 | .251672 | .279765 |
| 108 | .200606 | .230707 | .260231 | .289145 | .317414 | .345008 |
| 110 | .266973 | .296781 | .325907 | .354319 | .381982 | .408865 |
| 112 | .332687 | .361998 | .390519 | .418217 | .445059 | .471013 |
| 114 | .397462 | .426063 | .453764 | .480530 | .506329 | .531131 |
| 116 | .461011 | .488686 | .515344 | .540954 | .565484 | .588906 |
| 118 | .523052 | .549575 | .574964 | .599188 | .622217 | .644026 |
| 120 | .583304 | .608444 | .632330 | .654934 | .676228 | .696188 |
| 122 | .641488 | .665008 | .687155 | .707900 | .727220 | .745094 |
| 124 | .697330 | .718990 | .739154 | .757800 | .774906 | .790455 |
| 126 | .750556 | .770110 | .788049 | .804351 | .819002 | .831986 |
| 128 | .800900 | .818100 | .833564 | .847278 | .859230 | .869411 |
| 130 | .848096 | .862689 | .875431 | .886310 | .895320 | .902460 |
| 132 | .891883 | .903615 | .913382 | .921179 | .927006 | .930868 |
| 134 | .932001 | .940616 | .947156 | .951624 | .954027 | .954377 |
| 136 | .968195 | .973433 | .976493 | .977385 | .976125 | .972732 |
| 138 | 1.000208 | 1.001809 | 1.001135 | .998205 | .993044 | .985681 |
| 140 | 1.027784 | 1.025484 | 1.020821 | 1.013824 | 1.004528 | .992970 |
| 142 | 1.050663 | 1.044196 | 1.035289 | 1.023980 | 1.010315 | .994343 |
| 144 | 1.068577 | 1.057677 | 1.044267 | 1.028402 | 1.010136 | .989533 |
| 146 | 1.081251 | 1.065643 | 1.047473 | 1.026805 | 1.003709 | .978261 |
| 148 | 1.088392 | 1.067798 | 1.044603 | 1.018885 | .990728 | .960223 |
| 150 | 1.089680 | 1.063815 | 1.035325 | 1.004305 | .970855 | .935081 |
| 152 | 1.084765 | 1.053329 | 1.019265 | .982686 | .943706 | .902448 |
| 154 | 1.073241 | 1.035921 | .995992 | .953583 | .908828 | .861868 |
| 156 | 1.054635 | 1.011095 | .964988 | .916463 | .865674 | .812782 |
| 158 | 1.028368 | .978239 | .925614 | .870662 | .813560 | .754488 |
| 160 | .993712 | .936581 | .877056 | .815331 | .751603 | .686077 |
| 162 | .949716 | .885107 | .818243 | .749343 | .678631 | .606334 |
| 164 | .895096 | .822439 | .747710 | .671155 | .593027 | .513579 |
| 166 | .828038 | .746626 | .663376 | .578567 | .492481 | .405402 |
| 168 | .745859 | .654771 | .562147 | .468299 | .373543 | .278195 |
| 170 | .644342 | .542319 | .439144 | .335171 | .230753 | .126244 |
| 172 | .516334 | .401525 | .286065 | .170356 | .054797 | -.060215 |
| 174 | .348252 | .217673 | .087123 | -.042939 | -.172059 | -.299787 |
| 176 | .109276 | -.042641 | -.193542 | -.342888 | -.490146 | -.634796 |
| 178 | -.299769 | -.486953 | -.671394 | -.852421 | -1.029379 | -1.201627 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.80 | 1.82 | 1.84 | 1.86 | 1.88 | 1.90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.624791 | 2.616172 | 2.607623 | 2.599144 | 2.590733 | 2.582390 |
| 4 | 1.918902 | 1.910095 | 1.901358 | 1.892689 | 1.884088 | 1.875554 |
| 6 | 1.496086 | 1.487038 | 1.478060 | 1.469150 | 1.460307 | 1.451529 |
| 8 | 1.187795 | 1.178480 | 1.169235 | 1.160056 | 1.150945 | 1.141898 |
| 10 | .941764 | .932175 | .922654 | .913201 | .903815 | .894495 |
| 12 | .735057 | .725201 | .715414 | .705696 | .696045 | .686462 |
| 14 | .555683 | .545581 | .535550 | .525590 | .515699 | .505876 |
| 16 | .396665 | .386350 | .376109 | .365941 | .355846 | .345821 |
| 18 | .253645 | .243160 | .232753 | .222423 | .212169 | .201991 |
| 20 | .123758 | .113156 | .102636 | .092199 | .081843 | .071568 |
| 22 | .005053 | -.005605 | -.016174 | -.026656 | -.037049 | -.047356 |
| 24 | -.103835 | -.114482 | -.125033 | -.135487 | -.145847 | -.156112 |
| 26 | -.203885 | -.214446 | -.224901 | -.235253 | -.245500 | -.255643 |
| 28 | -.295805 | -.306200 | -.316479 | -.326644 | -.336695 | -.346633 |
| 30 | -.380117 | -.390261 | -.400279 | -.410171 | -.419938 | -.429580 |
| 32 | -.457211 | -.467017 | -.476683 | -.486212 | -.495602 | -.504856 |
| 34 | -.527381 | -.536757 | -.545979 | -.555051 | -.563971 | -.572740 |
| 36 | -.590852 | -.599704 | -.608389 | -.616908 | -.625262 | -.633450 |
| 38 | -.647800 | -.656034 | -.664086 | -.671957 | -.679647 | -.687157 |
| 40 | -.698367 | -.705889 | -.713213 | -.720339 | -.727270 | -.734004 |
| 42 | -.742672 | -.749387 | -.755888 | -.762175 | -.768251 | -.774114 |
| 44 | -.780818 | -.786634 | -.792219 | -.797575 | -.802702 | -.807601 |
| 46 | -.812899 | -.817726 | -.822306 | -.826640 | -.830729 | -.834574 |
| 48 | -.839008 | -.842759 | -.846247 | -.849473 | -.852438 | -.855144 |
| 50 | -.859238 | -.861830 | -.864144 | -.866179 | -.867939 | -.869426 |
| 52 | -.873684 | -.875040 | -.876102 | -.876872 | -.877352 | -.877544 |
| 54 | -.882449 | -.882497 | -.882236 | -.881671 | -.880802 | -.879633 |
| 56 | -.885645 | -.884319 | -.882672 | -.880708 | -.878429 | -.875840 |
| 58 | -.883392 | -.880634 | -.877544 | -.874127 | -.870386 | -.866325 |
| 60 | -.875823 | -.871582 | -.867001 | -.862085 | -.856837 | -.851264 |
| 62 | -.863082 | -.857316 | -.851205 | -.844753 | -.837965 | -.830847 |
| 64 | -.845324 | -.838002 | -.830331 | -.822316 | -.813964 | -.805281 |
| 66 | -.822721 | -.813820 | -.804569 | -.794975 | -.785045 | -.774787 |
| 68 | -.795455 | -.784962 | -.774122 | -.762944 | -.751435 | -.739604 |
| 70 | -.763721 | -.751635 | -.739209 | -.726452 | -.713375 | -.699985 |
| 72 | -.727729 | -.714060 | -.700062 | -.685745 | -.671120 | -.656198 |
| 74 | -.687700 | -.672469 | -.656925 | -.641078 | -.624941 | -.608525 |
| 76 | -.643870 | -.627110 | -.610057 | -.592723 | -.575121 | -.557264 |
| 78 | -.596483 | -.578241 | -.559729 | -.540963 | -.521956 | -.502724 |
| 80 | -.545799 | -.526131 | -.506224 | -.486093 | -.465755 | -.445225 |
| 82 | -.492085 | -.471062 | -.449835 | -.428420 | -.406836 | -.385100 |
| 84 | -.435620 | -.413325 | -.390865 | -.368261 | -.345530 | -.322691 |
| 86 | -.376693 | -.353220 | -.329629 | -.305940 | -.282173 | -.258349 |
| 88 | -.315600 | -.291056 | -.266446 | -.241791 | -.217113 | -.192433 |
| 90 | -.252644 | -.227149 | -.201645 | -.176154 | -.150700 | -.125305 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.80 | 1.82 | 1.84 | 1.86 | 1.88 | 1.90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.252644 | -.227149 | -.201645 | -.176154 | -.150700 | -.125305 |
| 92 | -.188138 | -.161822 | -.135560 | -.109376 | -.083294 | -.057337 |
| 94 | -.122397 | -.095404 | -.068532 | -.041807 | -.015255 | .011098 |
| 96 | -.055744 | -.028226 | -.000903 | .026196 | .053049 | .079627 |
| 98 | .011497 | .039375 | .066980 | .094282 | .121255 | .147872 |
| 100 | .078999 | .107063 | .134770 | .162089 | .188994 | .215458 |
| 102 | .146431 | .174498 | .202118 | .229262 | .255902 | .282011 |
| 104 | .213463 | .241340 | .268676 | .295444 | .321615 | .347160 |
| 106 | .279765 | .307250 | .334099 | .360282 | .385771 | .410539 |
| 108 | .345008 | .371894 | .398043 | .423427 | .448017 | .471786 |
| 110 | .408865 | .434937 | .460169 | .484532 | .508000 | .530548 |
| 112 | .471013 | .496050 | .520141 | .543260 | .565380 | .586478 |
| 114 | .531131 | .554908 | .577631 | .599276 | .619819 | .639238 |
| 116 | .588906 | .611191 | .632316 | .652257 | .670992 | .688501 |
| 118 | .644026 | .664588 | .683881 | .701885 | .718580 | .733950 |
| 120 | .696188 | .714792 | .732019 | .747852 | .762277 | .775278 |
| 122 | .745094 | .761503 | .776430 | .789861 | .801784 | .812192 |
| 124 | .790455 | .804432 | .816824 | .827621 | .836818 | .844409 |
| 126 | .831986 | .843295 | .852919 | .860855 | .867101 | .871659 |
| 128 | .869411 | .877816 | .884443 | .889293 | .892370 | .893683 |
| 130 | .902460 | .907728 | .911131 | .912675 | .912372 | .910236 |
| 132 | .930868 | .932770 | .932726 | .930750 | .926861 | .921080 |
| 134 | .954377 | .952688 | .948979 | .943275 | .935602 | .925990 |
| 136 | .972732 | .967229 | .959645 | .950012 | .938366 | .924747 |
| 138 | .985681 | .976148 | .964483 | .950728 | .934929 | .917136 |
| 140 | .992970 | .979195 | .963250 | .945189 | .925068 | .902947 |
| 142 | .994343 | .976119 | .955703 | .933159 | .908555 | .881965 |
| 144 | .989533 | .966660 | .941587 | .914393 | .885158 | .853968 |
| 146 | .978261 | .950541 | .920634 | .888631 | .854626 | .818718 |
| 148 | .960223 | .927463 | .892550 | .855586 | .816683 | .775951 |
| 150 | .935081 | .897092 | .857004 | .814937 | .771015 | .725366 |
| 152 | .902448 | .859040 | .813613 | .766303 | .717252 | .666603 |
| 154 | .861868 | .812848 | .761917 | .709230 | .654944 | .599220 |
| 156 | .812782 | .757950 | .701347 | .643146 | .583523 | .522655 |
| 158 | .754488 | .693631 | .631179 | .567323 | .502258 | .436182 |
| 160 | .686077 | .618960 | .550462 | .480797 | .410179 | .338826 |
| 162 | .606334 | .532685 | .457916 | .382263 | .305963 | .229253 |
| 164 | .513579 | .433068 | .351754 | .269896 | .187753 | .105584 |
| 166 | .405402 | .317614 | .229403 | .141055 | .052853 | -.034919 |
| 168 | .278195 | .182572 | .086988 | -.008241 | -.102807 | -.196404 |
| 170 | .126244 | .021994 | -.081645 | -.184332 | -.285726 | -.385493 |
| 172 | -.060215 | -.174289 | -.287038 | -.398080 | -.507044 | -.613566 |
| 174 | -.299787 | -.425680 | -.549304 | -.670237 | -.788066 | -.902392 |
| 176 | -.634796 | -.776328 | -.914247 | -1.048073 | -1.177342 | -1.301609 |
| 178 | -1.201627 | -1.368548 | -1.529545 | -1.684046 | -1.831507 | -1.971410 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.90 | 1.92 | 1.94 | 1.96 | 1.98 | 2.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.582390 | 2.574112 | 2.565900 | 2.557751 | 2.549666 | 2.541644 |
| 4 | 1.875554 | 1.867085 | 1.858680 | 1.850339 | 1.842060 | 1.833842 |
| 6 | 1.451529 | 1.442816 | 1.434166 | 1.425580 | 1.417055 | 1.408590 |
| 8 | 1.141898 | 1.132916 | 1.123998 | 1.115142 | 1.106346 | 1.097612 |
| 10 | .894495 | .885239 | .876047 | .866917 | .857849 | .848841 |
| 12 | .686462 | .676944 | .667490 | .658100 | .648773 | .639508 |
| 14 | .505876 | .496121 | .486433 | .476810 | .467252 | .457758 |
| 16 | .345821 | .335867 | .325983 | .316167 | .306419 | .296738 |
| 18 | .201991 | .191887 | .181856 | .171898 | .162012 | .152197 |
| 20 | .071568 | .061372 | .051255 | .041216 | .031254 | .021368 |
| 22 | -.047356 | -.057577 | -.067712 | -.077763 | -.087730 | -.097615 |
| 24 | -.156112 | -.166283 | -.176361 | -.186348 | -.196242 | -.206046 |
| 26 | -.255643 | -.265684 | -.275624 | -.285462 | -.295199 | -.304836 |
| 28 | -.346633 | -.356458 | -.366170 | -.375772 | -.385261 | -.394641 |
| 30 | -.429580 | -.439098 | -.448492 | -.457763 | -.466912 | -.475939 |
| 32 | -.504856 | -.513972 | -.522953 | -.531798 | -.540509 | -.549085 |
| 34 | -.572740 | -.581359 | -.589829 | -.598150 | -.606323 | -.614347 |
| 36 | -.633450 | -.641474 | -.649334 | -.657031 | -.664566 | -.671938 |
| 38 | -.687157 | -.694488 | -.701640 | -.708614 | -.715410 | -.722029 |
| 40 | -.734004 | -.740544 | -.746889 | -.753041 | -.759001 | -.764768 |
| 42 | -.774114 | -.779767 | -.785210 | -.790444 | -.795470 | -.800288 |
| 44 | -.807601 | -.812274 | -.816721 | -.820944 | -.824943 | -.828719 |
| 46 | -.834574 | -.838177 | -.841539 | -.844661 | -.847544 | -.850191 |
| 48 | -.855144 | -.857592 | -.859784 | -.861722 | -.863406 | -.864839 |
| 50 | -.869426 | -.870640 | -.871583 | -.872259 | -.872667 | -.872812 |
| 52 | -.877544 | -.877450 | -.877074 | -.876416 | -.875480 | -.874268 |
| 54 | -.879633 | -.878166 | -.876405 | -.874352 | -.872009 | -.869380 |
| 56 | -.875840 | -.872942 | -.869740 | -.866237 | -.862437 | -.858342 |
| 58 | -.866325 | -.861948 | -.857259 | -.852262 | -.846961 | -.841360 |
| 60 | -.851264 | -.845368 | -.839156 | -.832631 | -.825798 | -.818663 |
| 62 | -.830847 | -.823404 | -.815642 | -.807566 | -.799182 | -.790495 |
| 64 | -.805281 | -.796273 | -.786946 | -.777308 | -.767364 | -.757122 |
| 66 | -.774787 | -.764208 | -.753314 | -.742115 | -.730616 | -.718826 |
| 68 | -.739604 | -.727459 | -.715008 | -.702261 | -.689224 | -.675908 |
| 70 | -.699985 | -.686292 | -.672306 | -.658037 | -.643494 | -.628686 |
| 72 | -.656198 | -.640988 | -.625503 | -.609751 | -.593746 | -.577496 |
| 74 | -.608525 | -.591843 | -.574906 | -.557726 | -.540315 | -.522686 |
| 76 | -.557264 | -.539166 | -.520839 | -.502297 | -.483554 | -.464622 |
| 78 | -.502724 | -.483279 | -.463638 | -.443815 | -.423824 | -.403680 |
| 80 | -.445225 | -.424518 | -.403652 | -.382641 | -.361502 | -.340250 |
| 82 | -.385100 | -.363228 | -.341238 | -.319146 | -.296972 | -.274730 |
| 84 | -.322691 | -.299763 | -.276764 | -.253713 | -.230629 | -.207529 |
| 86 | -.258349 | -.234488 | -.210608 | -.186730 | -.162874 | -.139059 |
| 88 | -.192433 | -.167772 | -.143152 | -.118593 | -.094116 | -.069742 |
| 90 | -.125305 | -.099992 | -.074783 | -.049700 | -.024765 | -.000000 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 1.90 | 1.92 | 1.94 | 1.96 | 1.98 | 2.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | -.125305 | -.099992 | -.074783 | -.049700 | -.024765 | .000000 |
| 92 | -.057337 | -.031530 | -.005896 | .019542 | .044762 | .069742 |
| 94 | .011098 | .037230 | .063116 | .088732 | .114054 | .139059 |
| 96 | .079627 | .105905 | .131858 | .157463 | .182694 | .207529 |
| 98 | .147872 | .174107 | .199936 | .225331 | .250271 | .274730 |
| 100 | .215458 | .241454 | .266955 | .291938 | .316378 | .340250 |
| 102 | .282011 | .307562 | .332529 | .356887 | .380612 | .403680 |
| 104 | .347160 | .372055 | .396272 | .419788 | .442579 | .464622 |
| 106 | .410539 | .434560 | .457808 | .480260 | .501893 | .522686 |
| 108 | .471786 | .494711 | .516766 | .537930 | .558180 | .577496 |
| 110 | .530548 | .552151 | .572787 | .592434 | .611073 | .628687 |
| 112 | .586478 | .606531 | .625519 | .643423 | .660225 | .675908 |
| 114 | .639238 | .657513 | .674625 | .690557 | .705295 | .718826 |
| 116 | .688501 | .704768 | .719776 | .733512 | .745964 | .757122 |
| 118 | .733950 | .747981 | .760659 | .771976 | .781923 | .790495 |
| 120 | .775278 | .786847 | .796975 | .805655 | .812885 | .818663 |
| 122 | .812192 | .821077 | .828437 | .834269 | .838575 | .841360 |
| 124 | .844409 | .850394 | .854774 | .857554 | .858740 | .858342 |
| 126 | .871659 | .874532 | .875730 | .875261 | .873139 | .869380 |
| 128 | .893683 | .893242 | .891062 | .887158 | .881552 | .874268 |
| 130 | .910236 | .906285 | .900541 | .893029 | .883775 | .872812 |
| 132 | .921080 | .913435 | .903954 | .892669 | .879618 | .864839 |
| 134 | .925990 | .914475 | .901094 | .885889 | .868905 | .850191 |
| 136 | .924747 | .909198 | .891768 | .872508 | .851472 | .828719 |
| 138 | .917136 | .897404 | .875790 | .852355 | .827165 | .800288 |
| 140 | .902947 | .878893 | .852973 | .825261 | .795833 | .764768 |
| 142 | .881965 | .853464 | .823135 | .791060 | .757328 | .722029 |
| 144 | .853968 | .820911 | .786081 | .749575 | .711493 | .671938 |
| 146 | .818718 | .781009 | .741606 | .700619 | .658161 | .614347 |
| 148 | .775951 | .733509 | .689476 | .643977 | .597137 | .549085 |
| 150 | .725366 | .678123 | .629419 | .579394 | .528186 | .475939 |
| 152 | .666603 | .614504 | .561104 | .506557 | .451017 | .394641 |
| 154 | .599220 | .542221 | .484115 | .425069 | .365252 | .304836 |
| 156 | .522655 | .460725 | .397915 | .334408 | .270390 | .206046 |
| 158 | .436182 | .369294 | .301792 | .233879 | .165753 | .097615 |
| 160 | .338826 | .266955 | .194783 | .122528 | .050406 | -.021368 |
| 162 | .229253 | .152371 | .075551 | -.000970 | -.076963 | -.152197 |
| 164 | .105584 | .023646 | -.057804 | -.138517 | -.218242 | -.296738 |
| 166 | -.034919 | -.121985 | -.208070 | -.292901 | -.376217 | -.457758 |
| 168 | -.196404 | -.288729 | -.379486 | -.468388 | -.555152 | -.639508 |
| 170 | -.385493 | -.483309 | -.578854 | -.671822 | -.761913 | -.848842 |
| 172 | -.613566 | -.717293 | -.817883 | -.915008 | -1.008351 | -1.097612 |
| 174 | -.902392 | -1.012830 | -1.119012 | -1.220586 | -1.317217 | -1.408590 |
| 176 | -1.301609 | -1.420450 | -1.533463 | -1.640265 | -1.740502 | -1.833842 |
| 178 | -1.971410 | -2.103267 | -2.226624 | -2.341058 | -2.446181 | -2.541644 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

$$\mathfrak{P}_\nu(\cos \theta)$$

| $\nu$ | 2.00 | 2.02 | 2.04 | 2.06 | 2.08 | 2.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.541644 | 2.533681 | 2.525780 | 2.517938 | 2.510153 | 2.502428 |
| 4 | 1.833842 | 1.825684 | 1.817586 | 1.809547 | 1.801565 | 1.793640 |
| 6 | 1.408590 | 1.400185 | 1.391839 | 1.383552 | 1.375320 | 1.367146 |
| 8 | 1.097612 | 1.088936 | 1.080320 | 1.071761 | 1.063259 | 1.054813 |
| 10 | .848841 | .839894 | .831005 | .822175 | .813402 | .804685 |
| 12 | .639508 | .630303 | .621159 | .612074 | .603047 | .594079 |
| 14 | .457758 | .448326 | .438957 | .429650 | .420403 | .411216 |
| 16 | .296738 | .287123 | .277573 | .268088 | .258667 | .249309 |
| 18 | .152197 | .142453 | .132778 | .123172 | .113635 | .104164 |
| 20 | .021368 | .011559 | .001824 | -.007834 | -.017421 | -.026934 |
| 22 | -.097615 | -.107416 | -.117136 | -.126775 | -.136333 | -.145811 |
| 24 | -.206046 | -.215759 | -.225382 | -.234916 | -.244361 | -.253718 |
| 26 | -.304836 | -.314373 | -.323812 | -.333152 | -.342394 | -.351538 |
| 28 | -.394641 | -.403911 | -.413071 | -.422122 | -.431065 | -.439899 |
| 30 | -.475939 | -.484844 | -.493629 | -.502292 | -.510836 | -.519260 |
| 32 | -.549085 | -.557526 | -.565835 | -.574010 | -.582052 | -.589963 |
| 34 | -.614347 | -.622224 | -.629955 | -.637538 | -.644976 | -.652268 |
| 36 | -.671938 | -.679149 | -.686198 | -.693087 | -.699816 | -.706386 |
| 38 | -.722029 | -.728472 | -.734739 | -.740831 | -.746749 | -.752492 |
| 40 | -.764768 | -.770344 | -.775729 | -.780923 | -.785929 | -.790746 |
| 42 | -.800288 | -.804900 | -.809306 | -.813507 | -.817503 | -.821297 |
| 44 | -.828719 | -.832274 | -.835608 | -.838722 | -.841619 | -.844298 |
| 46 | -.850191 | -.852600 | -.854775 | -.856717 | -.858426 | -.859905 |
| 48 | -.864839 | -.866022 | -.866957 | -.867646 | -.868089 | -.868289 |
| 50 | -.872812 | -.872694 | -.872315 | -.871677 | -.870784 | -.869635 |
| 52 | -.874268 | -.872781 | -.871023 | -.868997 | -.866704 | -.864147 |
| 54 | -.869380 | -.866468 | -.863276 | -.859806 | -.856062 | -.852046 |
| 56 | -.858342 | -.853956 | -.849283 | -.844327 | -.839090 | -.833578 |
| 58 | -.841360 | -.835464 | -.829276 | -.822801 | -.816043 | -.809007 |
| 60 | -.818663 | -.811230 | -.803504 | -.795490 | -.787194 | -.778621 |
| 62 | -.790495 | -.781512 | -.772238 | -.762678 | -.752840 | -.742729 |
| 64 | -.757122 | -.746587 | -.735767 | -.724669 | -.713298 | -.701663 |
| 66 | -.718826 | -.706752 | -.694402 | -.681784 | -.668905 | -.655774 |
| 68 | -.675908 | -.662321 | -.648470 | -.634367 | -.620018 | -.605433 |
| 70 | -.628686 | -.613625 | -.598318 | -.582777 | -.567012 | -.551031 |
| 72 | -.577496 | -.561013 | -.544309 | -.527394 | -.510279 | -.492975 |
| 74 | -.522686 | -.504851 | -.486821 | -.468609 | -.450227 | -.431687 |
| 76 | -.464622 | -.445515 | -.426246 | -.406829 | -.387278 | -.367604 |
| 78 | -.403680 | -.383398 | -.362991 | -.342476 | -.321865 | -.301175 |
| 80 | -.340250 | -.318902 | -.297473 | -.275978 | -.254435 | -.232857 |
| 82 | -.274730 | -.252439 | -.230116 | -.207777 | -.185439 | -.163119 |
| 84 | -.207529 | -.184431 | -.161355 | -.138318 | -.115337 | -.092431 |
| 86 | -.139059 | -.115305 | -.091630 | -.068054 | -.044595 | -.021272 |
| 88 | -.069742 | -.045491 | -.021383 | .002560 | .026322 | .049882 |
| 90 | -.000000 | .024575 | .048938 | .073070 | .096949 | .120555 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 2.00 | 2.02 | 2.04 | 2.06 | 2.08 | 2.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .000000 | .024575 | .048938 | .073070 | .096949 | .120555 |
| 92 | .069742 | .094459 | .118891 | .143018 | .166819 | .190272 |
| 94 | .139059 | .163726 | .188031 | .211953 | .235471 | .258565 |
| 96 | .207529 | .231944 | .255917 | .279427 | .302452 | .324972 |
| 98 | .274730 | .298687 | .322117 | .345000 | .367315 | .389042 |
| 100 | .340250 | .363533 | .386203 | .408241 | .429624 | .450334 |
| 102 | .403680 | .426070 | .447759 | .468728 | .488956 | .508424 |
| 104 | .464622 | .485896 | .506379 | .526053 | .544900 | .562901 |
| 106 | .522686 | .542618 | .561670 | .579824 | .597063 | .613371 |
| 108 | .577496 | .595860 | .613254 | .629662 | .645069 | .659461 |
| 110 | .628687 | .645256 | .660767 | .675206 | .688560 | .700819 |
| 112 | .675908 | .690459 | .703866 | .716116 | .727201 | .737114 |
| 114 | .718826 | .731138 | .742222 | .752070 | .760677 | .768038 |
| 116 | .757122 | .766979 | .775529 | .782768 | .788695 | .793310 |
| 118 | .790495 | .797688 | .803500 | .807932 | .810988 | .812671 |
| 120 | .818663 | .822990 | .825869 | .827307 | .827311 | .825892 |
| 122 | .841360 | .842629 | .842392 | .840660 | .837446 | .832767 |
| 124 | .858342 | .856373 | .852847 | .847782 | .841198 | .833118 |
| 126 | .869380 | .864004 | .857031 | .848487 | .838397 | .826792 |
| 128 | .874268 | .865329 | .854767 | .842611 | .828898 | .813664 |
| 130 | .872812 | .860172 | .845893 | .830015 | .812580 | .793633 |
| 132 | .864839 | .848375 | .830271 | .810576 | .789340 | .766619 |
| 134 | .850191 | .829797 | .807778 | .784193 | .759101 | .732566 |
| 136 | .828719 | .804309 | .778307 | .750781 | .721800 | .691436 |
| 138 | .800288 | .771796 | .741763 | .710267 | .677388 | .643208 |
| 140 | .764768 | .732148 | .698059 | .662589 | .625829 | .587871 |
| 142 | .722029 | .685258 | .647112 | .607689 | .567091 | .525421 |
| 144 | .671938 | .631016 | .588834 | .545505 | .501140 | .455854 |
| 146 | .614347 | .569296 | .523128 | .475965 | .427933 | .379155 |
| 148 | .549085 | .499952 | .449871 | .398977 | .347405 | .295292 |
| 150 | .475939 | .422796 | .368904 | .314408 | .259456 | .204196 |
| 152 | .394641 | .337586 | .280010 | .222072 | .163931 | .105745 |
| 154 | .304836 | .243991 | .182888 | .121698 | .060592 | -.000262 |
| 156 | .206046 | .141559 | .077115 | .012896 | -.050917 | -.114145 |
| 158 | .097615 | .029662 | -.037906 | -.104900 | -.171124 | -.236392 |
| 160 | -.021368 | -.092585 | -.163033 | -.232508 | -.300807 | -.367735 |
| 162 | -.152197 | -.226448 | -.299493 | -.371119 | -.441112 | -.509270 |
| 164 | -.296738 | -.373765 | -.449090 | -.522489 | -.593742 | -.662639 |
| 166 | -.457758 | -.537272 | -.614518 | -.689261 | -.761275 | -.830345 |
| 168 | -.639508 | -.721190 | -.799946 | -.875536 | -.947728 | -1.016304 |
| 170 | -.848842 | -.932333 | -1.012125 | -1.087972 | -1.159638 | -1.226906 |
| 172 | -1.097612 | -1.182506 | -1.262764 | -1.338134 | -1.408384 | -1.473298 |
| 174 | -1.408590 | -1.494410 | -1.574403 | -1.648316 | -1.715919 | -1.777007 |
| 176 | -1.833842 | -1.919980 | -1.998641 | -2.069576 | -2.132562 | -2.187412 |
| 178 | -2.541644 | -2.627130 | -2.702364 | -2.767111 | -2.821171 | -2.864391 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

| $\nu$ | 2.10 | 2.12 | 2.14 | 2.16 | 2.18 | 2.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.502428 | 2.494757 | 2.487144 | 2.479585 | 2.472080 | 2.464629 |
| 4 | 1.793640 | 1.785770 | 1.777956 | 1.770196 | 1.762490 | 1.754836 |
| 6 | 1.367146 | 1.359026 | 1.350961 | 1.342950 | 1.334991 | 1.327085 |
| 8 | 1.054813 | 1.046422 | 1.038086 | 1.029803 | 1.021573 | 1.013395 |
| 10 | .804685 | .796024 | .787418 | .778866 | .770367 | .761921 |
| 12 | .594079 | .585167 | .576311 | .567511 | .558765 | .550073 |
| 14 | .411216 | .402088 | .393019 | .384007 | .375052 | .366154 |
| 16 | .249309 | .240014 | .230779 | .221607 | .212494 | .203442 |
| 18 | .104164 | .094761 | .085424 | .076153 | .066946 | .057804 |
| 20 | -.026934 | -.036374 | -.045743 | -.055040 | -.064267 | -.073423 |
| 22 | -.145811 | -.155209 | -.164529 | -.173770 | -.182934 | -.192020 |
| 24 | -.253718 | -.262988 | -.272171 | -.281267 | -.290277 | -.299201 |
| 26 | -.351538 | -.360586 | -.369537 | -.378392 | -.387151 | -.395815 |
| 28 | -.439899 | -.448627 | -.457247 | -.465760 | -.474168 | -.482469 |
| 30 | -.519260 | -.527566 | -.535752 | -.543820 | -.551771 | -.559603 |
| 32 | -.589963 | -.597741 | -.605389 | -.612906 | -.620292 | -.627548 |
| 34 | -.652268 | -.659415 | -.666418 | -.673276 | -.679991 | -.686562 |
| 36 | -.706386 | -.712796 | -.719048 | -.725142 | -.731079 | -.736858 |
| 38 | -.752492 | -.758063 | -.763460 | -.768685 | -.773739 | -.778622 |
| 40 | -.790746 | -.795375 | -.799818 | -.804074 | -.808144 | -.812029 |
| 42 | -.821297 | -.824889 | -.828280 | -.831470 | -.834461 | -.837253 |
| 44 | -.844298 | -.846761 | -.849009 | -.851043 | -.852864 | -.854474 |
| 46 | -.859905 | -.861154 | -.862176 | -.862971 | -.863541 | -.863887 |
| 48 | -.868289 | -.868248 | -.867967 | -.867448 | -.866693 | -.865703 |
| 50 | -.869635 | -.868235 | -.866585 | -.864686 | -.862543 | -.860155 |
| 52 | -.864147 | -.861329 | -.858252 | -.854920 | -.851335 | -.847499 |
| 54 | -.852046 | -.847763 | -.843215 | -.838405 | -.833337 | -.828014 |
| 56 | -.833578 | -.827793 | -.821739 | -.815422 | -.808843 | -.802007 |
| 58 | -.809007 | -.801697 | -.794117 | -.786273 | -.778169 | -.769810 |
| 60 | -.778621 | -.769775 | -.760662 | -.751288 | -.741658 | -.731778 |
| 62 | -.742729 | -.732351 | -.721712 | -.710818 | -.699677 | -.688293 |
| 64 | -.701663 | -.689770 | -.677626 | -.665238 | -.652615 | -.639761 |
| 66 | -.655774 | -.642398 | -.628786 | -.614945 | -.600884 | -.586610 |
| 68 | -.605433 | -.590622 | -.575593 | -.560355 | -.544917 | -.529289 |
| 70 | -.551031 | -.534846 | -.518467 | -.501903 | -.485165 | -.468264 |
| 72 | -.492975 | -.475494 | -.457847 | -.440045 | -.422099 | -.404020 |
| 74 | -.431687 | -.413003 | -.394185 | -.375246 | -.356200 | -.337057 |
| 76 | -.367604 | -.347823 | -.327947 | -.307990 | -.287965 | -.267885 |
| 78 | -.301175 | -.280419 | -.259611 | -.238767 | -.217901 | -.197026 |
| 80 | -.232857 | -.211262 | -.189664 | -.168079 | -.146522 | -.125008 |
| 82 | -.163119 | -.140833 | -.118599 | -.096432 | -.074348 | -.052364 |
| 84 | -.092431 | -.069618 | -.046913 | -.024335 | -.001901 | .020371 |
| 86 | -.021272 | .001896 | .024892 | .047698 | .070295 | .092667 |
| 88 | .049882 | .073221 | .096320 | .119160 | .141724 | .163993 |
| 90 | .120555 | .143869 | .166873 | .189545 | .211870 | .233827 |

| $\nu$ | 2.10 | 2.12 | 2.14 | 2.16 | 2.18 | 2.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .120555 | .143870 | .166873 | .189546 | .211870 | .233828 |
| 92 | .190272 | .213359 | .236060 | .258355 | .280227 | .301657 |
| 94 | .258565 | .281214 | .303399 | .325100 | .346300 | .366981 |
| 96 | .324972 | .346966 | .368416 | .389302 | .409607 | .429314 |
| 98 | .389042 | .410160 | .430651 | .450498 | .469683 | .488189 |
| 100 | .450334 | .470352 | .489660 | .508241 | .526079 | .543158 |
| 102 | .508424 | .527116 | .545014 | .562103 | .578368 | .593795 |
| 104 | .562901 | .580040 | .596303 | .611676 | .626145 | .639699 |
| 106 | .613371 | .628734 | .643140 | .656575 | .669031 | .680497 |
| 108 | .659461 | .672828 | .685157 | .696441 | .706671 | .715841 |
| 110 | .700819 | .711973 | .722015 | .730939 | .738740 | .745415 |
| 112 | .737114 | .745848 | .753398 | .759764 | .764943 | .768937 |
| 114 | .768038 | .774152 | .779018 | .782637 | .785014 | .786152 |
| 116 | .793310 | .796614 | .798613 | .799312 | .798719 | .796845 |
| 118 | .812671 | .812990 | .811953 | .809572 | .805859 | .800830 |
| 120 | .825892 | .823062 | .818836 | .813230 | .806265 | .797960 |
| 122 | .832767 | .826641 | .819089 | .810135 | .799802 | .788120 |
| 124 | .833118 | .823566 | .812571 | .800162 | .786370 | .771231 |
| 126 | .826792 | .813704 | .799168 | .783219 | .765899 | .747247 |
| 128 | .813664 | .796949 | .778796 | .759247 | .738352 | .716159 |
| 130 | .793633 | .773222 | .751398 | .728213 | .703723 | .677985 |
| 132 | .766619 | .742467 | .716944 | .690112 | .662034 | .632776 |
| 134 | .732566 | .704652 | .675429 | .644965 | .613334 | .580610 |
| 136 | .691436 | .659766 | .626866 | .592816 | .557697 | .521591 |
| 138 | .643208 | .607813 | .571289 | .533726 | .495213 | .455844 |
| 140 | .587871 | .548812 | .508746 | .467774 | .425995 | .383510 |
| 142 | .525421 | .482786 | .439292 | .395047 | .350160 | .304742 |
| 144 | .455854 | .409763 | .362984 | .315634 | .267833 | .219700 |
| 146 | .379155 | .329759 | .279872 | .229621 | .179133 | .128538 |
| 148 | .295292 | .242774 | .189989 | .137074 | .084165 | .031397 |
| 150 | .204196 | .148774 | .093337 | .038032 | -.016996 | -.071607 |
| 152 | .105745 | .047671 | -.010133 | -.067516 | -.124323 | -.180406 |
| 154 | -.000262 | -.060698 | -.120550 | -.179656 | -.237857 | -.294998 |
| 156 | -.114145 | -.176613 | -.238148 | -.298580 | -.357745 | -.415482 |
| 158 | -.236392 | -.300520 | -.363326 | -.424638 | -.484284 | -.542101 |
| 160 | -.367735 | -.433100 | -.496716 | -.558404 | -.617991 | -.675312 |
| 162 | -.509270 | -.575395 | -.639296 | -.700792 | -.759709 | -.815881 |
| 164 | -.662639 | -.728978 | -.792566 | -.853221 | -.910768 | -.965045 |
| 166 | -.830345 | -.896267 | -.958847 | -1.017903 | -1.073266 | -1.124780 |
| 168 | -1.016304 | -1.081059 | -1.141803 | -1.198358 | -1.250561 | -1.298266 |
| 170 | -1.226906 | -1.289575 | -1.347457 | -1.400386 | -1.448210 | -1.490796 |
| 172 | -1.473298 | -1.532681 | -1.586358 | -1.634174 | -1.675995 | -1.711710 |
| 174 | -1.777007 | -1.831396 | -1.878929 | -1.919472 | -1.952917 | -1.979183 |
| 176 | -2.187412 | -2.233964 | -2.272089 | -2.301690 | -2.322698 | -2.335079 |
| 178 | -2.864391 | -2.896651 | -2.917879 | -2.928041 | -2.927144 | -2.915238 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

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$$Q_\nu(\cos\theta)$$

| $\nu$ | 2.20 | 2.22 | 2.24 | 2.26 | 2.28 | 2.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.464629 | 2.457230 | 2.449883 | 2.442588 | 2.435343 | 2.428147 |
| 4 | 1.754836 | 1.747235 | 1.739684 | 1.732183 | 1.724734 | 1.717332 |
| 6 | 1.327085 | 1.319230 | 1.311426 | 1.303671 | 1.295966 | 1.288310 |
| 8 | 1.013395 | 1.005268 | .997191 | .989165 | .981188 | .973259 |
| 10 | .761921 | .753527 | .745183 | .736890 | .728648 | .720454 |
| 12 | .550073 | .541435 | .532849 | .524315 | .515833 | .507400 |
| 14 | .366154 | .357311 | .348523 | .339789 | .331110 | .322483 |
| 16 | .203442 | .194448 | .185513 | .176636 | .167816 | .159053 |
| 18 | .057804 | .048726 | .039710 | .030758 | .021867 | .013039 |
| 20 | -.073423 | -.082510 | -.091528 | -.100477 | -.109358 | -.118171 |
| 22 | -.192020 | -.201030 | -.209963 | -.218820 | -.227602 | -.236309 |
| 24 | -.299201 | -.308040 | -.316795 | -.325465 | -.334051 | -.342554 |
| 26 | -.395815 | -.404385 | -.412860 | -.421242 | -.429530 | -.437725 |
| 28 | -.482469 | -.490666 | -.498757 | -.506744 | -.514626 | -.522405 |
| | | | | | | |
| 30 | -.559603 | -.567319 | -.574918 | -.582401 | -.589768 | -.597020 |
| 32 | -.627548 | -.634675 | -.641673 | -.648542 | -.655282 | -.661895 |
| 34 | -.686562 | -.692991 | -.699278 | -.705423 | -.711426 | -.717288 |
| 36 | -.736858 | -.742482 | -.747949 | -.753261 | -.758418 | -.763421 |
| 38 | -.778622 | -.783335 | -.787878 | -.792252 | -.796458 | -.800496 |
| 40 | -.812029 | -.815731 | -.819249 | -.822585 | -.825739 | -.828712 |
| 42 | -.837253 | -.839848 | -.842246 | -.844449 | -.846457 | -.848272 |
| 44 | -.854474 | -.855874 | -.857065 | -.858048 | -.858824 | -.859396 |
| 46 | -.863887 | -.864012 | -.863916 | -.863601 | -.863069 | -.862321 |
| 48 | -.865703 | -.864482 | -.863030 | -.861349 | -.859442 | -.857311 |
| 50 | -.860155 | -.857527 | -.854661 | -.851558 | -.848221 | -.844653 |
| 52 | -.847499 | -.843416 | -.839088 | -.834519 | -.829710 | -.824666 |
| 54 | -.828014 | -.822440 | -.816618 | -.810551 | -.804243 | -.797697 |
| 56 | -.802007 | -.794919 | -.787583 | -.780002 | -.772180 | -.764123 |
| 58 | -.769810 | -.761199 | -.752343 | -.743246 | -.733913 | -.724349 |
| | | | | | | |
| 60 | -.731778 | -.721652 | -.711287 | -.700688 | -.689860 | -.678811 |
| 62 | -.688293 | -.676674 | -.664825 | -.652754 | -.640467 | -.627969 |
| 64 | -.639761 | -.626686 | -.613396 | -.599899 | -.586202 | -.572312 |
| 66 | -.586610 | -.572133 | -.557460 | -.542600 | -.527560 | -.512350 |
| 68 | -.529289 | -.513479 | -.497498 | -.481353 | -.465056 | -.448613 |
| 70 | -.468264 | -.451208 | -.434009 | -.416676 | -.399221 | -.381652 |
| 72 | -.404020 | -.385820 | -.367510 | -.349101 | -.330604 | -.312031 |
| 74 | -.337057 | -.317830 | -.298531 | -.279173 | -.259768 | -.240328 |
| 76 | -.267885 | -.247764 | -.227615 | -.207450 | -.187284 | -.167129 |
| 78 | -.197026 | -.176158 | -.155309 | -.134495 | -.113730 | -.093026 |
| 80 | -.125008 | -.103553 | -.082171 | -.060878 | -.039687 | -.018614 |
| 82 | -.052364 | -.030495 | -.008758 | .012831 | .034260 | .055511 |
| 84 | .020371 | .042468 | .064372 | .086066 | .107535 | .128763 |
| 86 | .092667 | .114797 | .136667 | .158261 | .179564 | .200558 |
| 88 | .163993 | .185951 | .207580 | .228863 | .249784 | .270327 |
| | | | | | | |
| 90 | .233827 | .255400 | .276572 | .297326 | .317645 | .337514 |

$$Q_\nu(\cos \theta)$$

| $\nu$ | 2.20 | 2.22 | 2.24 | 2.26 | 2.28 | 2.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .233828 | .255401 | .276572 | .297326 | .317645 | .337514 |
| 92 | .301657 | .322627 | .343121 | .363121 | .382613 | .401581 |
| 94 | .366981 | .387125 | .406715 | .425737 | .444174 | .462012 |
| 96 | .429314 | .448406 | .466866 | .484681 | .501835 | .518315 |
| 98 | .488189 | .506001 | .523105 | .539485 | .555130 | .570026 |
| 100 | .543158 | .559464 | .574985 | .589706 | .603618 | .616710 |
| 102 | .593795 | .608372 | .622087 | .634930 | .646892 | .657963 |
| 104 | .639699 | .652328 | .664022 | .674773 | .684575 | .693420 |
| 106 | .680497 | .690965 | .700429 | .708884 | .716325 | .722750 |
| 108 | .715841 | .723945 | .730981 | .736945 | .741839 | .745661 |
| 110 | .745415 | .750963 | .755383 | .758677 | .760849 | .761902 |
| 112 | .768937 | .771747 | .773378 | .773836 | .773128 | .771263 |
| 114 | .786152 | .786060 | .784745 | .782218 | .778491 | .773578 |
| 116 | .796845 | .793700 | .789300 | .783658 | .776793 | .768722 |
| 118 | .800830 | .794503 | .786896 | .778031 | .767929 | .756617 |
| 120 | .797960 | .788339 | .777427 | .765251 | .751841 | .737226 |
| 122 | .788120 | .775116 | .760824 | .745276 | .728508 | .710556 |
| 124 | .771231 | .754780 | .737056 | .718099 | .697951 | .676658 |
| 126 | .747247 | .727309 | .706128 | .683754 | .660235 | .635622 |
| 128 | .716159 | .692718 | .668085 | .642312 | .615458 | .587581 |
| 130 | .677985 | .651057 | .623002 | .593881 | .563760 | .532705 |
| 132 | .632776 | .602404 | .570989 | .538602 | .505314 | .471199 |
| 134 | .580610 | .546869 | .512188 | .476646 | .440324 | .403304 |
| 136 | .521591 | .484585 | .446764 | .408215 | .369026 | .329287 |
| 138 | .455844 | .415711 | .374909 | .333533 | .291679 | .249444 |
| 140 | .383510 | .340421 | .296832 | .252844 | .208563 | .164091 |
| 142 | .304742 | .258904 | .212756 | .166409 | .119974 | .073561 |
| 144 | .219700 | .171353 | .122911 | .074493 | .026215 | -.021804 |
| 146 | .128538 | .077961 | .027528 | -.022635 | -.072405 | -.121661 |
| 148 | .031397 | -.021093 | -.073176 | -.124719 | -.175593 | -.225672 |
| 150 | -.071607 | -.125656 | -.179007 | -.231523 | -.283070 | -.333519 |
| 152 | -.180406 | -.235616 | -.289811 | -.342849 | -.394595 | -.444917 |
| 154 | -.294998 | -.350926 | -.405494 | -.458558 | -.509981 | -.559630 |
| 156 | -.415482 | -.471635 | -.526055 | -.578597 | -.629123 | -.677501 |
| 158 | -.542101 | -.597932 | -.651626 | -.703038 | -.752034 | -.798483 |
| 160 | -.675312 | -.730208 | -.782531 | -.832138 | -.878898 | -.922687 |
| 162 | -.815881 | -.869152 | -.919376 | -.966418 | -1.010152 | -1.050463 |
| 164 | -.965045 | -1.015902 | -1.063198 | -1.106806 | -1.146610 | -1.182506 |
| 166 | -1.124780 | -1.172301 | -1.215698 | -1.254857 | -1.289674 | -1.320063 |
| 168 | -1.298266 | -1.341340 | -1.379669 | -1.413151 | -1.441705 | -1.465262 |
| 170 | -1.490796 | -1.528028 | -1.559811 | -1.586066 | -1.606737 | -1.621782 |
| 172 | -1.711710 | -1.741226 | -1.764474 | -1.781408 | -1.792002 | -1.796252 |
| 174 | -1.979183 | -1.998212 | -2.009974 | -2.014463 | -2.011701 | -2.001732 |
| 176 | -2.335079 | -2.338827 | -2.333969 | -2.320564 | -2.298700 | -2.268495 |
| 178 | -2.915238 | -2.892413 | -2.858796 | -2.814559 | -2.759909 | -2.695093 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ |

| $\nu$ | 2.30 | 2.32 | 2.34 | 2.36 | 2.38 | 2.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.428147 | 2.421001 | 2.413903 | 2.406853 | 2.399849 | 2.392892 |
| 4 | 1.717332 | 1.709979 | 1.702674 | 1.695415 | 1.688203 | 1.681037 |
| 6 | 1.288310 | 1.280701 | 1.273139 | 1.265624 | 1.258155 | 1.250731 |
| 8 | .973259 | .965378 | .957544 | .949757 | .942016 | .934319 |
| 10 | .720454 | .712309 | .704211 | .696161 | .688158 | .680200 |
| 12 | .507400 | .499019 | .490686 | .482403 | .474167 | .465979 |
| 14 | .322483 | .313909 | .305387 | .296917 | .288497 | .280128 |
| 16 | .159053 | .150346 | .141695 | .133100 | .124558 | .116071 |
| 18 | .013039 | .004271 | -.004435 | -.013082 | -.021670 | -.030198 |
| 20 | -.118171 | -.126917 | -.135596 | -.144209 | -.152757 | -.161239 |
| 22 | -.236309 | -.244942 | -.253501 | -.261985 | -.270397 | -.278736 |
| 24 | -.342554 | -.350974 | -.359311 | -.367566 | -.375740 | -.383831 |
| 26 | -.437725 | -.445827 | -.453837 | -.461755 | -.469581 | -.477316 |
| 28 | -.522405 | -.530080 | -.537652 | -.545121 | -.552488 | -.559753 |
| 30 | -.597020 | -.604157 | -.611178 | -.618085 | -.624878 | -.631558 |
| 32 | -.661895 | -.668380 | -.674738 | -.680969 | -.687073 | -.693052 |
| 34 | -.717288 | -.723010 | -.728592 | -.734034 | -.739337 | -.744501 |
| 36 | -.763421 | -.768270 | -.772966 | -.777509 | -.781900 | -.786139 |
| 38 | -.800496 | -.804367 | -.808072 | -.811611 | -.814984 | -.818194 |
| 40 | -.828712 | -.831505 | -.834118 | -.836554 | -.838812 | -.840893 |
| 42 | -.848272 | -.849894 | -.851325 | -.852566 | -.853617 | -.854480 |
| 44 | -.859396 | -.859763 | -.859928 | -.859891 | -.859655 | -.859220 |
| 46 | -.862321 | -.861359 | -.860185 | -.858800 | -.857206 | -.855405 |
| 48 | -.857311 | -.854956 | -.852382 | -.849589 | -.846580 | -.843356 |
| 50 | -.844653 | -.840856 | -.836833 | -.832585 | -.828117 | -.823430 |
| 52 | -.824666 | -.819389 | -.813883 | -.808149 | -.802192 | -.796015 |
| 54 | -.797697 | -.790918 | -.783908 | -.776671 | -.769212 | -.761534 |
| 56 | -.764123 | -.755833 | -.747316 | -.738576 | -.729617 | -.720444 |
| 58 | -.724349 | -.714558 | -.704547 | -.694319 | -.683880 | -.673235 |
| 60 | -.678811 | -.667544 | -.656067 | -.644384 | -.632503 | -.620428 |
| 62 | -.627969 | -.615269 | -.602373 | -.589286 | -.576017 | -.562571 |
| 64 | -.572312 | -.558238 | -.543986 | -.529563 | -.514979 | -.500239 |
| 66 | -.512350 | -.496977 | -.481451 | -.465779 | -.449970 | -.434032 |
| 68 | -.448613 | -.432037 | -.415334 | -.398515 | -.381590 | -.364566 |
| 70 | -.381652 | -.363981 | -.346218 | -.328372 | -.310455 | -.292476 |
| 72 | -.312031 | -.293393 | -.274700 | -.255965 | -.237197 | -.218409 |
| 74 | -.240328 | -.220864 | -.201390 | -.181916 | -.162456 | -.143019 |
| 76 | -.167129 | -.146997 | -.126903 | -.106858 | -.086875 | -.066967 |
| 78 | -.093026 | -.072397 | -.051859 | -.031422 | -.011102 | .009088 |
| 80 | -.018614 | .002326 | .023121 | .043757 | .064218 | .084492 |
| 82 | .055511 | .076570 | .097423 | .118054 | .138449 | .158596 |
| 84 | .128763 | .149735 | .170435 | .190850 | .210965 | .230765 |
| 86 | .200558 | .221229 | .241561 | .261540 | .281151 | .300380 |
| 88 | .270327 | .290477 | .310218 | .329536 | .348416 | .366845 |
| 90 | .337514 | .356917 | .375840 | .394268 | .412188 | .429586 |

$$Q_\nu(\cos\theta)$$

| ν | 2.30 | 2.32 | 2.34 | 2.36 | 2.38 | 2.40 |
|---|---|---|---|---|---|---|
| θ | | | | | | |
| 90 | .337514 | .356917 | .375840 | .394269 | .412188 | .429587 |
| 92 | .401581 | .420010 | .437885 | .455194 | .471923 | .488059 |
| 94 | .462012 | .479237 | .495836 | .511795 | .527104 | .541750 |
| 96 | .518315 | .534109 | .549203 | .563587 | .577250 | .590183 |
| 98 | .570026 | .584163 | .597530 | .610117 | .621916 | .632919 |
| 100 | .616710 | .628971 | .640394 | .650971 | .660695 | .669560 |
| 102 | .657963 | .668138 | .677408 | .685771 | .693220 | .699754 |
| 104 | .693420 | .701306 | .708228 | .714183 | .719172 | .723194 |
| 106 | .722750 | .728157 | .732546 | .735918 | .738276 | .739622 |
| 108 | .745661 | .748414 | .750102 | .750730 | .750302 | .748828 |
| 110 | .761902 | .761843 | .760679 | .758420 | .755075 | .750656 |
| 112 | .771263 | .768251 | .764105 | .758838 | .752464 | .745001 |
| 114 | .773578 | .767493 | .760255 | .751882 | .742393 | .731811 |
| 116 | .768722 | .759468 | .749053 | .737500 | .724834 | .711084 |
| 118 | .756617 | .744120 | .730467 | .715688 | .699813 | .682876 |
| 120 | .737226 | .721440 | .704516 | .686491 | .667403 | .647289 |
| 122 | .710556 | .691461 | .671263 | .650004 | .627728 | .604480 |
| 124 | .676658 | .654264 | .630816 | .606365 | .580960 | .554654 |
| 126 | .635622 | .609969 | .583330 | .555761 | .527319 | .498063 |
| 128 | .587581 | .558741 | .529000 | .498421 | .467067 | .435004 |
| 130 | .532705 | .500783 | .468063 | .434615 | .400510 | .365820 |
| 132 | .471199 | .436333 | .400792 | .364652 | .327991 | .290888 |
| 134 | .403304 | .365666 | .327496 | .288876 | .249891 | .210625 |
| 136 | .329287 | .289087 | .248515 | .207664 | .166622 | .125481 |
| 138 | .249444 | .206924 | .164216 | .121418 | .078623 | .035930 |
| 140 | .164091 | .119532 | .074989 | .030564 | -.013640 | -.057526 |
| 142 | .073561 | .027280 | -.018760 | -.064452 | -.109691 | -.154372 |
| 144 | -.021804 | -.069452 | -.116613 | -.163178 | -.209035 | -.254078 |
| 146 | -.121661 | -.170282 | -.218151 | -.265152 | -.311174 | -.356108 |
| 148 | -.225672 | -.274833 | -.322954 | -.369919 | -.415613 | -.459929 |
| 150 | -.333519 | -.382744 | -.430623 | -.477036 | -.521871 | -.565018 |
| 152 | -.444917 | -.493687 | -.540782 | -.586086 | -.629485 | -.670875 |
| 154 | -.559630 | -.607378 | -.653103 | -.696692 | -.738034 | -.777029 |
| 156 | -.677501 | -.723607 | -.767322 | -.808537 | -.847148 | -.883061 |
| 158 | -.798483 | -.842265 | -.883269 | -.921391 | -.956536 | -.988619 |
| 160 | -.922687 | -.963393 | -1.000911 | -1.035147 | -1.066018 | -1.093451 |
| 162 | -1.050463 | -1.087247 | -1.120411 | -1.149876 | -1.175572 | -1.197441 |
| 164 | -1.182506 | -1.214406 | -1.242230 | -1.265915 | -1.285410 | -1.300677 |
| 166 | -1.320063 | -1.345950 | -1.367278 | -1.384005 | -1.396101 | -1.403554 |
| 168 | -1.465262 | -1.483774 | -1.497206 | -1.505543 | -1.508786 | -1.506952 |
| 170 | -1.621782 | -1.631183 | -1.634936 | -1.633061 | -1.625594 | -1.612591 |
| 172 | -1.796252 | -1.794179 | -1.785820 | -1.771240 | -1.750519 | -1.723762 |
| 174 | -2.001732 | -1.984629 | -1.960489 | -1.929430 | -1.891599 | -1.847163 |
| 176 | -2.268495 | -2.230099 | -2.183688 | -2.129469 | -2.067675 | -1.998565 |
| 178 | -2.695093 | -2.620394 | -2.536130 | -2.442655 | -2.340356 | -2.229649 |
| 180 | -∞ | -∞ | -∞ | -∞ | -∞ | -∞ |

$$Q_\nu(\cos\theta)$$

| ν | 2.40 | 2.42 | 2.44 | 2.46 | 2.48 | 2.50 |
|---|------|------|------|------|------|------|
| θ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.392892 | 2.385981 | 2.379116 | 2.372294 | 2.365517 | 2.358783 |
| 4 | 1.681037 | 1.673915 | 1.666839 | 1.659806 | 1.652816 | 1.645870 |
| 6 | 1.250731 | 1.243352 | 1.236017 | 1.228725 | 1.221476 | 1.214270 |
| 8 | .934319 | .926668 | .919061 | .911497 | .903977 | .896499 |
| 10 | .680200 | .672288 | .664421 | .656598 | .648820 | .641084 |
| 12 | .465979 | .457839 | .449745 | .441697 | .433695 | .425738 |
| 14 | .280128 | .271809 | .263539 | .255318 | .247145 | .239020 |
| 16 | .116071 | .107638 | .099258 | .090930 | .082655 | .074432 |
| 18 | -.030198 | -.038668 | -.047079 | -.055433 | -.063729 | -.071968 |
| 20 | -.161239 | -.169656 | -.178008 | -.186296 | -.194521 | -.202682 |
| 22 | -.278736 | -.287003 | -.295197 | -.303319 | -.311371 | -.319351 |
| 24 | -.383831 | -.391842 | -.399772 | -.407621 | -.415390 | -.423079 |
| 26 | -.477316 | -.484960 | -.492513 | -.499976 | -.507349 | -.514632 |
| 28 | -.559753 | -.566916 | -.573977 | -.580938 | -.587797 | -.594556 |
| | | | | | | |
| 30 | -.631558 | -.638124 | -.644577 | -.650917 | -.657145 | -.663260 |
| 32 | -.693052 | -.698905 | -.704633 | -.710235 | -.715713 | -.721067 |
| 34 | -.744501 | -.749526 | -.754414 | -.759165 | -.763778 | -.768255 |
| 36 | -.786139 | -.790228 | -.794165 | -.797953 | -.801591 | -.805080 |
| 38 | -.818194 | -.821239 | -.824122 | -.826842 | -.829401 | -.831798 |
| 40 | -.840893 | -.842798 | -.844528 | -.846084 | -.847467 | -.848678 |
| 42 | -.854480 | -.855156 | -.855645 | -.855951 | -.856072 | -.856011 |
| 44 | -.859220 | -.858588 | -.857760 | -.856738 | -.855523 | -.854117 |
| 46 | -.855405 | -.853398 | -.851187 | -.848774 | -.846161 | -.843350 |
| 48 | -.843356 | -.839921 | -.836276 | -.832423 | -.828365 | -.824104 |
| 50 | -.823430 | -.818527 | -.813410 | -.808083 | -.802549 | -.796808 |
| 52 | -.796015 | -.789620 | -.783011 | -.776192 | -.769165 | -.761934 |
| 54 | -.761534 | -.753640 | -.745535 | -.737222 | -.728705 | -.719989 |
| 56 | -.720444 | -.711061 | -.701472 | -.691683 | -.681697 | -.671519 |
| 58 | -.673235 | -.662390 | -.651349 | -.640118 | -.628702 | -.617106 |
| | | | | | | |
| 60 | -.620428 | -.608166 | -.595722 | -.583103 | -.570315 | -.557364 |
| 62 | -.562571 | -.548955 | -.535177 | -.521243 | -.507160 | -.492935 |
| 64 | -.500239 | -.485353 | -.470327 | -.455169 | -.439886 | -.424487 |
| 66 | -.434032 | -.417974 | -.401804 | -.385532 | -.369164 | -.352711 |
| 68 | -.364566 | -.347455 | -.330264 | -.313004 | -.295684 | -.278313 |
| 70 | -.292476 | -.274446 | -.256374 | -.238271 | -.220147 | -.202012 |
| 72 | -.218409 | -.199611 | -.180814 | -.162029 | -.143266 | -.124537 |
| 74 | -.143019 | -.123620 | -.104268 | -.084976 | -.065755 | -.046616 |
| 76 | -.066967 | -.047146 | -.027424 | -.007814 | .011671 | .031022 |
| 78 | .009088 | .029137 | .049031 | .068758 | .088304 | .107658 |
| 80 | .084492 | .104565 | .124423 | .144055 | .163446 | .182585 |
| 82 | .158596 | .178479 | .198085 | .217401 | .236415 | .255113 |
| 84 | .230765 | .250236 | .269366 | .288141 | .306548 | .324575 |
| 86 | .300380 | .319214 | .337638 | .355640 | .373208 | .390330 |
| 88 | .366845 | .384810 | .402297 | .419294 | .435789 | .451771 |
| | | | | | | |
| 90 | .429586 | .446450 | .462768 | .478527 | .493717 | .508327 |

$$Q_\nu(\cos\theta)$$

| $\nu$ $\theta$ | 2.40 | 2.42 | 2.44 | 2.46 | 2.48 | 2.50 |
|---|---|---|---|---|---|---|
| 90 | .429587 | .446451 | .462768 | .478527 | .493717 | .508328 |
| 92 | .488059 | .503592 | .518509 | .532801 | .546457 | .559468 |
| 94 | .541750 | .555724 | .569015 | .581615 | .593514 | .604706 |
| 96 | .590183 | .602376 | .613822 | .624512 | .634442 | .643604 |
| 98 | .632919 | .643118 | .652508 | .661084 | .668840 | .675775 |
| 100 | .669560 | .677563 | .684699 | .690966 | .696362 | .700887 |
| 102 | .699754 | .705371 | .710070 | .713850 | .716714 | .718663 |
| 104 | .723194 | .726251 | .728344 | .729478 | .729657 | .728887 |
| 106 | .739622 | .739962 | .739302 | .737649 | .735012 | .731400 |
| 108 | .748828 | .746316 | .742776 | .738218 | .732657 | .726106 |
| 110 | .750656 | .745178 | .738654 | .731100 | .722533 | .712972 |
| 112 | .745001 | .736467 | .726881 | .716264 | .704637 | .692025 |
| 114 | .731811 | .720158 | .707459 | .693741 | .679030 | .663355 |
| 116 | .711084 | .696278 | .680446 | .663618 | .645829 | .627112 |
| 118 | .682876 | .664911 | .645953 | .626041 | .605213 | .583508 |
| 120 | .647289 | .626191 | .604150 | .581211 | .557416 | .532811 |
| 122 | .604480 | .580308 | .555258 | .529381 | .502727 | .475347 |
| 124 | .554654 | .527499 | .499550 | .470861 | .441491 | .411495 |
| 126 | .498063 | .468051 | .437346 | .406008 | .374100 | .341684 |
| 128 | .435004 | .402299 | .369017 | .335226 | .300995 | .266392 |
| 130 | .365820 | .330616 | .294973 | .258963 | .222661 | .186140 |
| 132 | .290888 | .253420 | .215667 | .177709 | .139622 | .101488 |
| 134 | .210625 | .171163 | .131589 | .091986 | .052440 | .013033 |
| 136 | .125481 | .084329 | .043258 | .002354 | -.038292 | -.078597 |
| 138 | .035930 | -.006567 | -.048776 | -.090604 | -.131958 | -.172749 |
| 140 | -.057526 | -.100993 | -.143943 | -.186282 | -.227914 | -.268749 |
| 142 | -.154372 | -.198393 | -.241653 | -.284055 | -.325503 | -.365905 |
| 144 | -.254078 | -.298202 | -.341304 | -.383287 | -.424055 | -.463515 |
| 146 | -.356108 | -.399847 | -.442289 | -.483337 | -.522895 | -.560874 |
| 148 | -.459929 | -.502758 | -.544002 | -.583562 | -.621348 | -.657272 |
| 150 | -.565018 | -.606375 | -.645843 | -.683328 | -.718744 | -.752008 |
| 152 | -.670875 | -.710155 | -.747230 | -.782015 | -.814427 | -.844392 |
| 154 | -.777029 | -.813583 | -.847607 | -.879024 | -.907758 | -.933748 |
| 156 | -.883061 | -.916189 | -.946455 | -.973788 | -.998128 | -1.019422 |
| 158 | -.988619 | -1.017565 | -1.043306 | -1.065786 | -1.084959 | -1.100786 |
| 160 | -1.093451 | -1.117383 | -1.137764 | -1.154552 | -1.167718 | -1.177243 |
| 162 | -1.197441 | -1.215438 | -1.229531 | -1.239698 | -1.245930 | -1.248231 |
| 164 | -1.300677 | -1.311693 | -1.318446 | -1.320940 | -1.319190 | -1.313227 |
| 166 | -1.403554 | -1.406365 | -1.404552 | -1.398146 | -1.387193 | -1.371754 |
| 168 | -1.506952 | -1.500075 | -1.488205 | -1.471408 | -1.449767 | -1.423381 |
| 170 | -1.612591 | -1.594124 | -1.570287 | -1.541187 | -1.506953 | -1.467726 |
| 172 | -1.723762 | -1.691094 | -1.652658 | -1.608616 | -1.559152 | -1.504464 |
| 174 | -1.847163 | -1.796313 | -1.739261 | -1.676240 | -1.607502 | -1.533323 |
| 176 | -1.998565 | -1.922425 | -1.839564 | -1.750315 | -1.655032 | -1.554090 |
| 178 | -2.229649 | -2.110983 | -1.984832 | -1.851699 | -1.712109 | -1.566612 |
| 180 | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | $-\infty$ | -1.570796 |

$$Q_\nu(\cos\,\theta)$$

| $\nu$ | 2.50 | 2.52 | 2.54 | 2.56 | 2.58 | 2.60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.358783 | 2.352092 | 2.345443 | 2.338836 | 2.332270 | 2.325744 |
| 4 | 1.645870 | 1.638965 | 1.632102 | 1.625280 | 1.618499 | 1.611759 |
| 6 | 1.214270 | 1.207105 | 1.199982 | 1.192899 | 1.185857 | 1.178854 |
| 8 | .896499 | .889063 | .881668 | .874314 | .867001 | .859727 |
| 10 | .641085 | .633392 | .625741 | .618133 | .610566 | .603039 |
| 12 | .425739 | .417826 | .409957 | .402132 | .394351 | .386612 |
| 14 | .239020 | .230943 | .222912 | .214928 | .206990 | .199098 |
| 16 | .074432 | .066260 | .058139 | .050068 | .042048 | .034078 |
| 18 | -.071968 | -.080150 | -.088276 | -.096347 | -.104362 | -.112322 |
| 20 | -.202682 | -.210779 | -.218815 | -.226788 | -.234699 | -.242549 |
| 22 | -.319351 | -.327260 | -.335099 | -.342868 | -.350567 | -.358197 |
| 24 | -.423078 | -.430688 | -.438219 | -.445670 | -.453043 | -.460338 |
| 26 | -.514632 | -.521826 | -.528930 | -.535946 | -.542873 | -.549712 |
| 28 | -.594556 | -.601215 | -.607774 | -.614233 | -.620593 | -.626854 |
| 30 | -.663260 | -.669264 | -.675156 | -.680937 | -.686608 | -.692168 |
| 32 | -.721067 | -.726297 | -.731404 | -.736387 | -.741248 | -.745987 |
| 34 | -.768254 | -.772595 | -.776800 | -.780870 | -.784805 | -.788606 |
| 36 | -.805079 | -.808420 | -.811613 | -.814659 | -.817558 | -.820311 |
| 38 | -.831798 | -.834035 | -.836113 | -.838032 | -.839793 | -.841397 |
| 40 | -.848678 | -.849717 | -.850586 | -.851286 | -.851817 | -.852180 |
| 42 | -.856010 | -.855768 | -.855345 | -.854743 | -.853964 | -.853009 |
| 44 | -.854116 | -.852520 | -.850735 | -.848765 | -.846608 | -.844268 |
| 46 | -.843350 | -.840342 | -.837140 | -.833745 | -.830160 | -.826386 |
| 48 | -.824104 | -.819642 | -.814982 | -.810126 | -.805076 | -.799835 |
| 50 | -.796808 | -.790866 | -.784724 | -.778385 | -.771853 | -.765130 |
| 52 | -.761933 | -.754502 | -.746872 | -.739049 | -.731035 | -.722834 |
| 54 | -.719988 | -.711076 | -.701972 | -.692680 | -.683204 | -.673549 |
| 56 | -.671519 | -.661154 | -.650607 | -.639882 | -.628984 | -.617918 |
| 58 | -.617106 | -.605336 | -.593397 | -.581295 | -.569035 | -.556622 |
| 60 | -.557364 | -.544255 | -.530996 | -.517592 | -.504049 | -.490374 |
| 62 | -.492934 | -.478574 | -.464084 | -.449474 | -.434748 | -.419915 |
| 64 | -.424487 | -.408979 | -.393369 | -.377666 | -.361878 | -.346011 |
| 66 | -.352710 | -.336179 | -.319578 | -.302917 | -.286203 | -.269445 |
| 68 | -.278312 | -.260899 | -.243453 | -.225984 | -.208501 | -.191013 |
| 70 | -.202012 | -.183876 | -.165748 | -.147639 | -.129559 | -.111517 |
| 72 | -.124537 | -.105852 | -.087221 | -.068656 | -.050167 | -.031763 |
| 74 | -.046616 | -.027571 | -.008631 | .010193 | .028890 | .047450 |
| 76 | .031022 | .050225 | .069270 | .088144 | .106837 | .125337 |
| 78 | .107659 | .126808 | .145741 | .164446 | .182912 | .201126 |
| 80 | .182586 | .201460 | .220058 | .238366 | .256375 | .274072 |
| 82 | .255114 | .273485 | .291516 | .309196 | .326513 | .343456 |
| 84 | .324575 | .342210 | .359440 | .376255 | .392644 | .408596 |
| 86 | .390330 | .406994 | .423188 | .438902 | .454125 | .468849 |
| 88 | .451771 | .467229 | .482153 | .496531 | .510356 | .523618 |
| 90 | .508327 | .522348 | .535770 | .548584 | .560782 | .572357 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 2.50 | 2.52 | 2.54 | 2.56 | 2.58 | 2.60 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .508328 | .522348 | .535770 | .548584 | .560783 | .572358 |
| 92 | .559468 | .571825 | .583522 | .594550 | .604902 | .614574 |
| 94 | .604706 | .615183 | .624939 | .633969 | .642269 | .649833 |
| 96 | .643604 | .651994 | .659608 | .666442 | .672495 | .677764 |
| 98 | .675775 | .681885 | .687169 | .691625 | .695255 | .698060 |
| 100 | .700887 | .704540 | .707323 | .709239 | .710290 | .710480 |
| 102 | .718663 | .719702 | .719835 | .719067 | .717404 | .714855 |
| 104 | .728887 | .727175 | .724529 | .720959 | .716474 | .711086 |
| 106 | .731400 | .726824 | .721297 | .714832 | .707442 | .699144 |
| 108 | .726106 | .718581 | .710096 | .700671 | .690324 | .679074 |
| 110 | .712972 | .702437 | .690949 | .678530 | .665203 | .650993 |
| 112 | .692025 | .678452 | .663943 | .648527 | .632231 | .615085 |
| 114 | .663355 | .646746 | .629234 | .610851 | .591631 | .571608 |
| 116 | .627112 | .607502 | .587037 | .565752 | .543688 | .520884 |
| 118 | .583508 | .560967 | .537632 | .513547 | .488755 | .463301 |
| | | | | | | |
| 120 | .532811 | .507444 | .481361 | .454611 | .427244 | .399310 |
| 122 | .475347 | .447294 | .418620 | .389379 | .359627 | .329418 |
| 124 | .411495 | .380932 | .349860 | .318339 | .286429 | .254188 |
| 126 | .341684 | .308825 | .275586 | .242031 | .208226 | .174234 |
| 128 | .266392 | .231486 | .196347 | .161042 | .125642 | .090215 |
| 130 | .186139 | .149473 | .112736 | .076001 | .039341 | .002828 |
| 132 | .101487 | .063383 | .025386 | -.012425 | -.049975 | -.087189 |
| 134 | .013033 | -.026152 | -.065036 | -.103536 | -.141574 | -.179073 |
| 136 | -.078597 | -.118473 | -.157836 | -.196604 | -.234696 | -.272033 |
| 138 | -.172750 | -.212890 | -.252295 | -.290878 | -.328559 | -.365260 |
| 140 | -.268749 | -.308697 | -.347672 | -.385589 | -.422367 | -.457928 |
| 142 | -.365905 | -.405172 | -.443216 | -.479955 | -.515311 | -.549205 |
| 144 | -.463516 | -.501581 | -.538165 | -.573189 | -.606576 | -.638254 |
| 146 | -.560874 | -.597187 | -.631753 | -.664497 | -.695346 | -.724235 |
| 148 | -.657272 | -.691253 | -.723215 | -.753088 | -.780806 | -.806312 |
| | | | | | | |
| 150 | -.752009 | -.783047 | -.811790 | -.838175 | -.862146 | -.883654 |
| 152 | -.844393 | -.871845 | -.896725 | -.918978 | -.938561 | -.955434 |
| 154 | -.933749 | -.956937 | -.977276 | -.994724 | -1.009250 | -1.020830 |
| 156 | -1.019423 | -1.037628 | -1.052711 | -1.064645 | -1.073416 | -1.079014 |
| 158 | -1.100787 | -1.113242 | -1.122308 | -1.127978 | -1.130253 | -1.129148 |
| 160 | -1.177243 | -1.183119 | -1.185349 | -1.183947 | -1.178938 | -1.170357 |
| 162 | -1.248231 | -1.246615 | -1.241110 | -1.231753 | -1.218597 | -1.201703 |
| 164 | -1.313228 | -1.303092 | -1.288841 | -1.270540 | -1.248272 | -1.222128 |
| 166 | -1.371754 | -1.351904 | -1.327731 | -1.299336 | -1.266836 | -1.230357 |
| 168 | -1.423381 | -1.392362 | -1.356837 | -1.316950 | -1.272856 | -1.224724 |
| 170 | -1.467727 | -1.423668 | -1.374952 | -1.321769 | -1.264322 | -1.202830 |
| 172 | -1.504464 | -1.444770 | -1.380302 | -1.311309 | -1.238053 | -1.160813 |
| 174 | -1.533323 | -1.453991 | -1.369815 | -1.281117 | -1.188236 | -1.091523 |
| 176 | -1.554090 | -1.447883 | -1.336823 | -1.221336 | -1.101864 | -.978862 |
| 178 | -1.566612 | -1.415774 | -1.260182 | -1.100438 | -.937157 | -.770965 |
| | | | | | | |
| 180 | -1.570796 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos \theta)$$

| $\nu$ | 2.60 | 2.62 | 2.64 | 2.66 | 2.68 | 2.70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.325744 | 2.319260 | 2.312815 | 2.306407 | 2.300040 | 2.293711 |
| 4 | 1.611759 | 1.605057 | 1.598394 | 1.591769 | 1.585184 | 1.578636 |
| 6 | 1.178854 | 1.171890 | 1.164966 | 1.158078 | 1.151230 | 1.144418 |
| 8 | .859727 | .852493 | .845297 | .838140 | .831021 | .823940 |
| 10 | .603039 | .595553 | .588107 | .580699 | .573332 | .566003 |
| 12 | .386612 | .378915 | .371260 | .363646 | .356074 | .348542 |
| 14 | .199098 | .191251 | .183448 | .175690 | .167976 | .160306 |
| 16 | .034078 | .026156 | .018284 | .010461 | .002685 | -.005041 |
| 18 | -.112322 | -.120227 | -.128078 | -.135875 | -.143618 | -.151308 |
| 20 | -.242549 | -.250337 | -.258064 | -.265730 | -.273336 | -.280881 |
| 22 | -.358197 | -.365758 | -.373250 | -.380673 | -.388028 | -.395315 |
| 24 | -.460338 | -.467554 | -.474693 | -.481754 | -.488738 | -.495645 |
| 26 | -.549712 | -.556463 | -.563127 | -.569703 | -.576191 | -.582593 |
| 28 | -.626854 | -.633016 | -.639080 | -.645045 | -.650912 | -.656682 |
| | | | | | | |
| 30 | -.692168 | -.697618 | -.702958 | -.708188 | -.713309 | -.718321 |
| 32 | -.745987 | -.750604 | -.755098 | -.759472 | -.763725 | -.767858 |
| 34 | -.788606 | -.792273 | -.795807 | -.799207 | -.802476 | -.805612 |
| 36 | -.820311 | -.822919 | -.825382 | -.827700 | -.829875 | -.831907 |
| 38 | -.841397 | -.842845 | -.844137 | -.845273 | -.846256 | -.847086 |
| 40 | -.852180 | -.852377 | -.852409 | -.852276 | -.851980 | -.851521 |
| 42 | -.853009 | -.851878 | -.850573 | -.849096 | -.847447 | -.845628 |
| 44 | -.844268 | -.841746 | -.839043 | -.836162 | -.833103 | -.829869 |
| 46 | -.826386 | -.822425 | -.818279 | -.813951 | -.809442 | -.804755 |
| 48 | -.799835 | -.794405 | -.788788 | -.782988 | -.777007 | -.770846 |
| 50 | -.765130 | -.758220 | -.751124 | -.743846 | -.736389 | -.728757 |
| 52 | -.722834 | -.714449 | -.705885 | -.697144 | -.688230 | -.679147 |
| 54 | -.673549 | -.663718 | -.653716 | -.643546 | -.633213 | -.622722 |
| 56 | -.617918 | -.606689 | -.595300 | -.583758 | -.572067 | -.560232 |
| 58 | -.556622 | -.544062 | -.531360 | -.518523 | -.505555 | -.492461 |
| | | | | | | |
| 60 | -.490374 | -.476573 | -.462651 | -.448616 | -.434473 | -.420229 |
| 62 | -.419915 | -.404981 | -.389954 | -.374839 | -.359645 | -.344377 |
| 64 | -.346011 | -.330073 | -.314073 | -.298017 | -.281914 | -.265771 |
| 66 | -.269445 | -.252651 | -.235830 | -.218990 | -.202140 | -.185287 |
| 68 | -.191013 | -.173528 | -.156056 | -.138607 | -.121188 | -.103809 |
| 70 | -.111517 | -.093523 | -.075587 | -.057717 | -.039925 | -.022218 |
| 72 | -.031763 | -.013456 | .004744 | .022829 | .040788 | .058610 |
| 74 | .047450 | .065861 | .084115 | .102198 | .120103 | .137819 |
| 76 | .125337 | .143633 | .161715 | .179572 | .197194 | .214570 |
| 78 | .201126 | .219079 | .236759 | .254156 | .271258 | .288058 |
| 80 | .274072 | .291447 | .308488 | .325186 | .341530 | .357511 |
| 82 | .343456 | .360015 | .376179 | .391938 | .407283 | .422203 |
| 84 | .408596 | .424100 | .439148 | .453729 | .467835 | .481456 |
| 86 | .468849 | .483062 | .496757 | .509925 | .522557 | .534647 |
| 88 | .523618 | .536309 | .548421 | .559947 | .570880 | .581214 |
| | | | | | | |
| 90 | .572357 | .583302 | .593610 | .603275 | .612293 | .620659 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 2.60 | 2.62 | 2.64 | 2.66 | 2.68 | 2.70 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .572358 | .583302 | .593610 | .603275 | .612293 | .620659 |
| 92 | .614574 | .623559 | .631853 | .639453 | .646354 | .652555 |
| 94 | .649833 | .656660 | .662746 | .668090 | .672691 | .676548 |
| 96 | .677764 | .682249 | .685951 | .688868 | .691004 | .692361 |
| 98 | .698060 | .700040 | .701200 | .701543 | .701073 | .699796 |
| 100 | .710480 | .709815 | .708301 | .705944 | .702753 | .698735 |
| 102 | .714855 | .711428 | .707132 | .701979 | .695978 | .689143 |
| 104 | .711086 | .704807 | .697651 | .689632 | .680765 | .671067 |
| 106 | .699144 | .689954 | .679888 | .668967 | .657209 | .644634 |
| 108 | .679074 | .666943 | .653952 | .640125 | .625484 | .610056 |
| 110 | .650993 | .635925 | .620025 | .603323 | .585845 | .567621 |
| 112 | .615085 | .597119 | .578364 | .558852 | .538618 | .517695 |
| 114 | .571608 | .550817 | .529295 | .507079 | .484207 | .460718 |
| 116 | .520884 | .497379 | .473216 | .448437 | .423084 | .397201 |
| 118 | .463301 | .437230 | .410590 | .383426 | .355787 | .327720 |
| 120 | .399310 | .370858 | .341941 | .312610 | .282917 | .252914 |
| 122 | .329418 | .298808 | .267852 | .236608 | .205130 | .173477 |
| 124 | .254188 | .221679 | .188960 | .156093 | .123137 | .090154 |
| 126 | .174234 | .140121 | .105951 | .071787 | .037694 | .003735 |
| 128 | .090215 | .054829 | .019552 | -.015546 | -.050402 | -.084949 |
| 130 | .002828 | -.033464 | -.069467 | -.105110 | -.140323 | -.175040 |
| 132 | -.087189 | -.123991 | -.160309 | -.196072 | -.231208 | -.265650 |
| 134 | -.179073 | -.215956 | -.252149 | -.287579 | -.322176 | -.355871 |
| 136 | -.272033 | -.308538 | -.344137 | -.378757 | -.412328 | -.444785 |
| 138 | -.365260 | -.400902 | -.435413 | -.468721 | -.500759 | -.531463 |
| 140 | -.457928 | -.492197 | -.525103 | -.556577 | -.586555 | -.614977 |
| 142 | -.549205 | -.581568 | -.612330 | -.641429 | -.668804 | -.694401 |
| 144 | -.638254 | -.668155 | -.696218 | -.722384 | -.746600 | -.768817 |
| 146 | -.724235 | -.751101 | -.775890 | -.798551 | -.819039 | -.837316 |
| 148 | -.806312 | -.829551 | -.850477 | -.869049 | -.885232 | -.899000 |
| 150 | -.883654 | -.902655 | -.919114 | -.933001 | -.944295 | -.952980 |
| 152 | -.955434 | -.969569 | -.980941 | -.989536 | -.995347 | -.998373 |
| 154 | -1.020830 | -1.029449 | -1.035099 | -1.037782 | -1.037506 | -1.034290 |
| 156 | -1.079014 | -1.081444 | -1.080716 | -1.076849 | -1.069872 | -1.059823 |
| 158 | -1.129148 | -1.124683 | -1.116892 | -1.105815 | -1.091505 | -1.074019 |
| 160 | -1.170357 | -1.158249 | -1.142673 | -1.123693 | -1.101386 | -1.075837 |
| 162 | -1.201703 | -1.181143 | -1.157002 | -1.129373 | -1.098362 | -1.064083 |
| 164 | -1.222128 | -1.192212 | -1.158640 | -1.121537 | -1.081041 | -1.037299 |
| 166 | -1.230357 | -1.190040 | -1.146036 | -1.098507 | -1.047627 | -.993580 |
| 168 | -1.224724 | -1.172734 | -1.117081 | -1.057968 | -.995611 | -.930234 |
| 170 | -1.202830 | -1.137522 | -1.068641 | -.996440 | -.921180 | -.843136 |
| 172 | -1.160813 | -1.079875 | -.995543 | -.908125 | -.817943 | -.725325 |
| 174 | -1.091523 | -.991341 | -.888065 | -.782078 | -.673772 | -.563545 |
| 176 | -.978862 | -.852795 | -.724139 | -.593374 | -.460990 | -.327477 |
| 178 | -.770965 | -.602496 | -.432392 | -.261299 | -.089862 | .081273 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 2.70 | 2.72 | 2.74 | 2.76 | 2.78 | 2.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.293711 | 2.287419 | 2.281164 | 2.274947 | 2.268766 | 2.262620 |
| 4 | 1.578636 | 1.572124 | 1.565649 | 1.559211 | 1.552808 | 1.546441 |
| 6 | 1.144418 | 1.137643 | 1.130905 | 1.124202 | 1.117536 | 1.110903 |
| 8 | .823940 | .816895 | .809888 | .802916 | .795981 | .789080 |
| 10 | .566003 | .558711 | .551458 | .544242 | .537063 | .529920 |
| 12 | .348542 | .341050 | .333598 | .326185 | .318811 | .311476 |
| 14 | .160306 | .152679 | .145094 | .137553 | .130054 | .122596 |
| 16 | -.005041 | -.012721 | -.020354 | -.027940 | -.035479 | -.042972 |
| 18 | -.151308 | -.158944 | -.166528 | -.174060 | -.181539 | -.188966 |
| 20 | -.280881 | -.288368 | -.295794 | -.303161 | -.310470 | -.317719 |
| 22 | -.395315 | -.402534 | -.409686 | -.416771 | -.423788 | -.430739 |
| 24 | -.495645 | -.502475 | -.509229 | -.515906 | -.522507 | -.529033 |
| 26 | -.582593 | -.588908 | -.595136 | -.601278 | -.607334 | -.613305 |
| 28 | -.656682 | -.662354 | -.667929 | -.673407 | -.678789 | -.684074 |
| 30 | -.718321 | -.723225 | -.728020 | -.732707 | -.737287 | -.741759 |
| 32 | -.767858 | -.771870 | -.775763 | -.779536 | -.783190 | -.786726 |
| 34 | -.805612 | -.808617 | -.811491 | -.814234 | -.816848 | -.819332 |
| 36 | -.831907 | -.833797 | -.835545 | -.837151 | -.838618 | -.839944 |
| 38 | -.847086 | -.847763 | -.848288 | -.848662 | -.848887 | -.848962 |
| 40 | -.851521 | -.850901 | -.850120 | -.849180 | -.848082 | -.846828 |
| 42 | -.845628 | -.843641 | -.841486 | -.839166 | -.836681 | -.834033 |
| 44 | -.829869 | -.826461 | -.822881 | -.819131 | -.815212 | -.811127 |
| 46 | -.804755 | -.799891 | -.794852 | -.789641 | -.784261 | -.778713 |
| 48 | -.770846 | -.764510 | -.758000 | -.751318 | -.744468 | -.737453 |
| 50 | -.728757 | -.720952 | -.712977 | -.704835 | -.696530 | -.688065 |
| 52 | -.679147 | -.669898 | -.660487 | -.650918 | -.641194 | -.631320 |
| 54 | -.622722 | -.612076 | -.601280 | -.590338 | -.579254 | -.568033 |
| 56 | -.560232 | -.548258 | -.536149 | -.523911 | -.511548 | -.499066 |
| 58 | -.492461 | -.479249 | -.465922 | -.452488 | -.438950 | -.425316 |
| 60 | -.420229 | -.405889 | -.391461 | -.376951 | -.362364 | -.347707 |
| 62 | -.344377 | -.329044 | -.313651 | -.298206 | -.282716 | -.267188 |
| 64 | -.265771 | -.249596 | -.233395 | -.217178 | -.200951 | -.184721 |
| 66 | -.185287 | -.168440 | -.151607 | -.134797 | -.118016 | -.101274 |
| 68 | -.103809 | -.086478 | -.069204 | -.051997 | -.034864 | -.017813 |
| 70 | -.022218 | -.004606 | .012901 | .030295 | .047567 | .064707 |
| 72 | .058610 | .076288 | .093810 | .111168 | .128352 | .145353 |
| 74 | .137819 | .155335 | .172643 | .189732 | .206593 | .223218 |
| 76 | .214570 | .231691 | .248547 | .265128 | .281425 | .297429 |
| 78 | .288058 | .304543 | .320705 | .336535 | .352023 | .367161 |
| 80 | .357511 | .373119 | .388344 | .403178 | .417613 | .431639 |
| 82 | .422203 | .436691 | .450738 | .464334 | .477474 | .490148 |
| 84 | .481456 | .494586 | .507216 | .519339 | .530948 | .542036 |
| 86 | .534647 | .546187 | .557171 | .567593 | .577446 | .586727 |
| 88 | .581214 | .590943 | .600062 | .608566 | .616453 | .623717 |
| 90 | .620659 | .628368 | .635418 | .641806 | .647530 | .652589 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 2.70 | 2.72 | 2.74 | 2.76 | 2.78 | 2.80 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .620659 | .628368 | .635419 | .641807 | .647530 | .652589 |
| 92 | .652555 | .658053 | .662848 | .666938 | .670324 | .673007 |
| 94 | .676548 | .679663 | .682035 | .683668 | .684565 | .684727 |
| 96 | .692361 | .692942 | .692751 | .691792 | .690072 | .687596 |
| 98 | .699796 | .697718 | .694847 | .691189 | .686755 | .681552 |
| 100 | .698735 | .693902 | .688263 | .681829 | .674614 | .666629 |
| 102 | .689143 | .681488 | .673025 | .663771 | .653741 | .642952 |
| 104 | .671067 | .660554 | .649246 | .637160 | .624318 | .610739 |
| 106 | .644634 | .631265 | .617123 | .602232 | .586616 | .570299 |
| 108 | .610056 | .593865 | .576939 | .559305 | .540992 | .522027 |
| 110 | .567621 | .548682 | .529058 | .508782 | .487887 | .466404 |
| 112 | .517695 | .496117 | .473922 | .451144 | .427820 | .403990 |
| 114 | .460718 | .436651 | .412047 | .386946 | .361389 | .335418 |
| 116 | .397201 | .370832 | .344022 | .316815 | .289257 | .261394 |
| 118 | .327720 | .299275 | .270499 | .241442 | .212154 | .182682 |
| | | | | | | |
| 120 | .252914 | .222655 | .192192 | .161578 | .130865 | .100107 |
| 122 | .173477 | .141704 | .109868 | .078025 | .046231 | .014541 |
| 124 | .090154 | .057202 | .024342 | -.008367 | -.040868 | -.073103 |
| 126 | .003735 | -.030026 | -.063529 | -.096712 | -.129515 | -.161879 |
| 128 | -.084949 | -.119122 | -.152856 | -.186090 | -.218762 | -.250812 |
| 130 | -.175040 | -.209194 | -.242721 | -.275556 | -.307640 | -.338911 |
| 132 | -.265650 | -.299330 | -.332185 | -.364150 | -.395166 | -.425174 |
| 134 | -.355871 | -.388599 | -.420296 | -.450899 | -.480352 | -.508598 |
| 136 | -.444785 | -.476060 | -.506095 | -.534830 | -.562209 | -.588181 |
| 138 | -.531463 | -.560770 | -.588624 | -.614969 | -.639756 | -.662936 |
| 140 | -.614977 | -.641785 | -.666927 | -.690354 | -.712022 | -.731890 |
| 142 | -.694401 | -.718168 | -.740060 | -.760035 | -.778056 | -.794092 |
| 144 | -.768817 | -.788994 | -.807092 | -.823079 | -.836927 | -.848616 |
| 146 | -.837316 | -.853348 | -.867107 | -.878572 | -.887726 | -.894560 |
| 148 | -.899000 | -.910329 | -.919205 | -.925617 | -.929564 | -.931049 |
| | | | | | | |
| 150 | -.952980 | -.959048 | -.962498 | -.963335 | -.961571 | -.957226 |
| 152 | -.998373 | -.998621 | -.996106 | -.990852 | -.982886 | -.972247 |
| 154 | -1.034290 | -1.028158 | -1.019144 | -1.007290 | -.992644 | -.975263 |
| 156 | -1.059823 | -1.046748 | -1.030701 | -1.011745 | -.973848 | -.941698 |
| 158 | -1.074019 | -1.053429 | -1.029812 | -1.003253 | -.943259 | -.903100 |
| 160 | -1.075837 | -1.047142 | -1.015404 | -.980736 | -.896896 | -.848309 |
| 162 | -1.064083 | -1.026660 | -.986225 | -.942920 | -.833119 | -.775658 |
| 164 | -1.037299 | -.990466 | -.940708 | -.888199 | -.749685 | -.682848 |
| 166 | -.993580 | -.936557 | -.876759 | -.814396 | -.643310 | -.566483 |
| 168 | -.930234 | -.862070 | -.791361 | -.718356 | -.508811 | -.421173 |
| 170 | -.843136 | -.762586 | -.679819 | -.595128 | -.337279 | -.237609 |
| 172 | -.725325 | -.630606 | -.534128 | -.436236 | -.111535 | .002197 |
| 174 | -.563545 | -.451800 | -.338944 | -.225386 | .207978 | .339740 |
| 176 | -.327477 | -.193330 | -.059044 | .074888 | .750054 | .910197 |
| 178 | .081273 | .251464 | .420075 | .586477 | | |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos \theta)$$

| $\nu$ | 2.80 | 2.82 | 2.84 | 2.86 | 2.88 | 2.90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.262620 | 2.256511 | 2.250436 | 2.244395 | 2.238390 | 2.232418 |
| 4 | 1.546441 | 1.540108 | 1.533811 | 1.527547 | 1.521317 | 1.515121 |
| 6 | 1.110903 | 1.104306 | 1.097743 | 1.091214 | 1.084718 | 1.078255 |
| 8 | .789080 | .782215 | .775385 | .768588 | .761825 | .755096 |
| 10 | .529920 | .522813 | .515743 | .508707 | .501707 | .494741 |
| 12 | .311476 | .304179 | .296920 | .289698 | .282514 | .275367 |
| 14 | .122596 | .115180 | .107805 | .100471 | .093178 | .085925 |
| 16 | -.042972 | -.050419 | -.057820 | -.065176 | -.072487 | -.079753 |
| 18 | -.188966 | -.196342 | -.203666 | -.210940 | -.218162 | -.225334 |
| 20 | -.317719 | -.324910 | -.332043 | -.339118 | -.346135 | -.353094 |
| 22 | -.430739 | -.437623 | -.444441 | -.451193 | -.457879 | -.464500 |
| 24 | -.529033 | -.535483 | -.541857 | -.548157 | -.554381 | -.560531 |
| 26 | -.613305 | -.619189 | -.624989 | -.630704 | -.636333 | -.641878 |
| 28 | -.684074 | -.689263 | -.694356 | -.699354 | -.704256 | -.709063 |
| 30 | -.741759 | -.746124 | -.750381 | -.754533 | -.758578 | -.762518 |
| 32 | -.786726 | -.790144 | -.793443 | -.796626 | -.799691 | -.802640 |
| 34 | -.819332 | -.821687 | -.823913 | -.826012 | -.827983 | -.829827 |
| 36 | -.839944 | -.841131 | -.842180 | -.843091 | -.843865 | -.844502 |
| 38 | -.848962 | -.848889 | -.848669 | -.848302 | -.847790 | -.847133 |
| 40 | -.846828 | -.845417 | -.843851 | -.842132 | -.840261 | -.838238 |
| 42 | -.834033 | -.831224 | -.828254 | -.825125 | -.821840 | -.818398 |
| 44 | -.811127 | -.806876 | -.802462 | -.797887 | -.793152 | -.788259 |
| 46 | -.778713 | -.772998 | -.767121 | -.761082 | -.754884 | -.748530 |
| 48 | -.737453 | -.730274 | -.722935 | -.715438 | -.707786 | -.699982 |
| 50 | -.688065 | -.679443 | -.670667 | -.661741 | -.652667 | -.643449 |
| 52 | -.631320 | -.621298 | -.611133 | -.600829 | -.590388 | -.579816 |
| 54 | -.568033 | -.556679 | -.545197 | -.533590 | -.521863 | -.510021 |
| 56 | -.499066 | -.486470 | -.473764 | -.460954 | -.448044 | -.435040 |
| 58 | -.425316 | -.411590 | -.397778 | -.383886 | -.369919 | -.355884 |
| 60 | -.347707 | -.332986 | -.318208 | -.303378 | -.288503 | -.273590 |
| 62 | -.267188 | -.251628 | -.236043 | -.220440 | -.204827 | -.189209 |
| 64 | -.184721 | -.168497 | -.152285 | -.136093 | -.119929 | -.103799 |
| 66 | -.101274 | -.084578 | -.067936 | -.051357 | -.034847 | -.018414 |
| 68 | -.017813 | -.000854 | .016005 | .032756 | .049392 | .065904 |
| 70 | .064707 | .081708 | .098560 | .115255 | .131785 | .148141 |
| 72 | .145353 | .162163 | .178772 | .195173 | .211355 | .227312 |
| 74 | .223218 | .239596 | .255720 | .271581 | .287169 | .302478 |
| 76 | .297429 | .313131 | .328523 | .343595 | .358341 | .372752 |
| 78 | .367161 | .381940 | .396352 | .410389 | .424043 | .437306 |
| 80 | .431639 | .445250 | .458437 | .471193 | .483511 | .495385 |
| 82 | .490148 | .502350 | .514073 | .525311 | .536058 | .546308 |
| 84 | .542036 | .552598 | .562629 | .572122 | .581073 | .589478 |
| 86 | .586727 | .595429 | .603550 | .611086 | .618033 | .624390 |
| 88 | .623717 | .630357 | .636369 | .641753 | .646507 | .650630 |
| 90 | .652589 | .656980 | .660705 | .663764 | .666157 | .667885 |

$$Q_\nu(\cos \theta)$$

| $\nu$ | 2.80 | 2.82 | 2.84 | 2.86 | 2.88 | 2.90 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .652589 | .656980 | .660705 | .663764 | .666157 | .667886 |
| 92 | .673007 | .674988 | .676269 | .676854 | .676744 | .675946 |
| 94 | .684727 | .684160 | .682869 | .680858 | .678134 | .674704 |
| 96 | .687596 | .684372 | .680407 | .675710 | .670291 | .664159 |
| 98 | .681552 | .675593 | .668887 | .661447 | .653284 | .644414 |
| 100 | .666629 | .657889 | .648408 | .638201 | .627285 | .615677 |
| 102 | .642952 | .631421 | .619167 | .606209 | .592567 | .578261 |
| 104 | .610739 | .596445 | .581458 | .565801 | .549499 | .532574 |
| 106 | .570299 | .553307 | .535666 | .517403 | .498546 | .479124 |
| 108 | .522027 | .502441 | .482265 | .461529 | .440266 | .418506 |
| 110 | .466404 | .444369 | .421816 | .398780 | .375297 | .351401 |
| 112 | .403990 | .379689 | .354958 | .329835 | .304359 | .278569 |
| 114 | .335418 | .309076 | .282404 | .255446 | .228243 | .200840 |
| 116 | .261394 | .233271 | .204934 | .176431 | .147806 | .119106 |
| 118 | .182682 | .153078 | .123390 | .093667 | .063959 | .034314 |
| | | | | | | |
| 120 | .100107 | .069356 | .038664 | .008082 | -.022336 | -.052543 |
| 122 | .014541 | -.016989 | -.048306 | -.079355 | -.110083 | -.140439 |
| 124 | -.073103 | -.105015 | -.136546 | -.167644 | -.198252 | -.228320 |
| 126 | -.161879 | -.193744 | -.225056 | -.255757 | -.285793 | -.315113 |
| 128 | -.250812 | -.282181 | -.312813 | -.342652 | -.371646 | -.399743 |
| 130 | -.338911 | -.369312 | -.398787 | -.427283 | -.454748 | -.481134 |
| 132 | -.425174 | -.454118 | -.481945 | -.508603 | -.534043 | -.558222 |
| 134 | -.508598 | -.535583 | -.561258 | -.585575 | -.608491 | -.629964 |
| 136 | -.588181 | -.612697 | -.635712 | -.657182 | -.677071 | -.695344 |
| 138 | -.662936 | -.684468 | -.704312 | -.722432 | -.738797 | -.753381 |
| 140 | -.731890 | -.749923 | -.766089 | -.780360 | -.792715 | -.803135 |
| 142 | -.794092 | -.808115 | -.820103 | -.830039 | -.837910 | -.843710 |
| 144 | -.848616 | -.858126 | -.865449 | -.870578 | -.873512 | -.874256 |
| 146 | -.894560 | -.899068 | -.901254 | -.901123 | -.898690 | -.893972 |
| 148 | -.931049 | -.930081 | -.926676 | -.920858 | -.912654 | -.902099 |
| | | | | | | |
| 150 | -.957226 | -.950325 | -.940901 | -.928993 | -.914646 | -.897911 |
| 152 | -.972247 | -.958978 | -.943129 | -.924758 | -.903928 | -.880711 |
| 154 | -.975263 | -.955210 | -.932556 | -.907379 | -.879764 | -.849800 |
| 156 | -.965395 | -.938164 | -.908352 | -.876057 | -.841386 | -.804452 |
| 158 | -.941698 | -.906913 | -.869611 | -.829914 | -.787953 | -.743865 |
| 160 | -.903100 | -.860397 | -.815291 | -.767933 | -.718478 | -.667086 |
| 162 | -.848309 | -.797324 | -.744110 | -.688847 | -.631715 | -.572903 |
| 164 | -.775658 | -.716011 | -.654378 | -.590967 | -.525988 | -.459657 |
| 166 | -.682848 | -.614114 | -.543716 | -.471893 | -.398886 | -.324940 |
| 168 | -.566483 | -.488141 | -.408553 | -.327992 | -.246730 | -.165044 |
| 170 | -.421173 | -.332518 | -.243155 | -.153393 | -.063541 | .026092 |
| 172 | -.237609 | -.137578 | -.037538 | .062160 | .161170 | .259148 |
| 174 | .002197 | .115407 | .227689 | .338646 | .447884 | .555021 |
| 176 | .339740 | .469696 | .597376 | .722322 | .844084 | .962230 |
| 178 | .910197 | 1.066320 | 1.217847 | 1.364225 | 1.504920 | 1.639424 |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos \theta)$$

| $\nu$ | 2.90 | 2.92 | 2.94 | 2.96 | 2.98 | 3.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.232418 | 2.226479 | 2.220574 | 2.214701 | 2.208860 | 2.203052 |
| 4 | 1.515121 | 1.508957 | 1.502826 | 1.496726 | 1.490659 | 1.484623 |
| 6 | 1.078255 | 1.071826 | 1.065427 | 1.059062 | 1.052728 | 1.046425 |
| 8 | .755096 | .748400 | .741737 | .735106 | .728506 | .721939 |
| 10 | .494741 | .487810 | .480912 | .474049 | .467218 | .460420 |
| 12 | .275367 | .268256 | .261181 | .254143 | .247140 | .240172 |
| 14 | .085925 | .078711 | .071537 | .064403 | .057307 | .050251 |
| 16 | -.079753 | -.086975 | -.094153 | -.101286 | -.108376 | -.115423 |
| 18 | -.225334 | -.232456 | -.239528 | -.246550 | -.253522 | -.260445 |
| 20 | -.353094 | -.359997 | -.366842 | -.373630 | -.380362 | -.387037 |
| 22 | -.464500 | -.471055 | -.477545 | -.483969 | -.490329 | -.496625 |
| 24 | -.560531 | -.566606 | -.572607 | -.578534 | -.584386 | -.590166 |
| 26 | -.641878 | -.647339 | -.652715 | -.658007 | -.663216 | -.668341 |
| 28 | -.709063 | -.713775 | -.718393 | -.722916 | -.727345 | -.731680 |
| 30 | -.762518 | -.766352 | -.770080 | -.773704 | -.777223 | -.780638 |
| 32 | -.802640 | -.805473 | -.808189 | -.810791 | -.813277 | -.815649 |
| 34 | -.829827 | -.831545 | -.833136 | -.834603 | -.835945 | -.837163 |
| 36 | -.844502 | -.845004 | -.845371 | -.845603 | -.845702 | -.845668 |
| 38 | -.847133 | -.846332 | -.845388 | -.844302 | -.843076 | -.841709 |
| 40 | -.838238 | -.836065 | -.833743 | -.831273 | -.828657 | -.825896 |
| 42 | -.818398 | -.814802 | -.811054 | -.807154 | -.803105 | -.798908 |
| 44 | -.788259 | -.783211 | -.778008 | -.772654 | -.767150 | -.761498 |
| 46 | -.748530 | -.742021 | -.735360 | -.728550 | -.721592 | -.714490 |
| 48 | -.699982 | -.692029 | -.683929 | -.675684 | -.667300 | -.658777 |
| 50 | -.643449 | -.634090 | -.624594 | -.614963 | -.605202 | -.595314 |
| 52 | -.579816 | -.569116 | -.558292 | -.547347 | -.536286 | -.525113 |
| 54 | -.510021 | -.498068 | -.486008 | -.473846 | -.461587 | -.449234 |
| 56 | -.435040 | -.421946 | -.408768 | -.395510 | -.382178 | -.368777 |
| 58 | -.355884 | -.341785 | -.327628 | -.313419 | -.299164 | -.284868 |
| 60 | -.273590 | -.258643 | -.243670 | -.228677 | -.213670 | -.198654 |
| 62 | -.189209 | -.173593 | -.157986 | -.142396 | -.126828 | -.111288 |
| 64 | -.103799 | -.087711 | -.071671 | -.055688 | -.039769 | -.023919 |
| 66 | -.018414 | -.002067 | .014187 | .030342 | .046388 | .062320 |
| 68 | .065904 | .082283 | .098523 | .114615 | .130553 | .146327 |
| 70 | .148141 | .164315 | .180299 | .196085 | .211666 | .227035 |
| 72 | .227312 | .243034 | .258515 | .273746 | .288719 | .303427 |
| 74 | .302478 | .317499 | .332224 | .346646 | .360758 | .374551 |
| 76 | .372752 | .386820 | .400538 | .413899 | .426896 | .439522 |
| 78 | .437306 | .450173 | .462636 | .474689 | .486325 | .497538 |
| 80 | .495385 | .506809 | .517776 | .528281 | .538319 | .547885 |
| 82 | .546308 | .556057 | .565299 | .574030 | .582246 | .589944 |
| 84 | .589478 | .597334 | .604637 | .611384 | .617573 | .623201 |
| 86 | .624390 | .630153 | .635321 | .639894 | .643870 | .647250 |
| 88 | .650630 | .654122 | .656983 | .659215 | .660819 | .661797 |
| 90 | .667885 | .668953 | .669361 | .669113 | .668213 | .666666 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 2.90 | 2.92 | 2.94 | 2.96 | 2.98 | 3.00 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .667886 | .668953 | .669361 | .669113 | .668213 | .666666 |
| 92 | .675946 | .674462 | .672300 | .669463 | .665960 | .661797 |
| 94 | .674704 | .670576 | .665757 | .660256 | .654084 | .647250 |
| 96 | .664159 | .657324 | .649799 | .641595 | .632724 | .623201 |
| 98 | .644414 | .634848 | .624603 | .613693 | .602134 | .589944 |
| 100 | .615677 | .603394 | .590454 | .576876 | .562680 | .547885 |
| 102 | .578261 | .563312 | .547743 | .531575 | .514833 | .497538 |
| 104 | .532574 | .515053 | .496961 | .478324 | .459169 | .439522 |
| 106 | .479124 | .459164 | .438697 | .417752 | .396360 | .374551 |
| 108 | .418506 | .396283 | .373630 | .350580 | .327168 | .303427 |
| 110 | .351401 | .327131 | .302522 | .277612 | .252437 | .227034 |
| 112 | .278569 | .252507 | .226211 | .199722 | .173081 | .146327 |
| 114 | .200840 | .173279 | .145604 | .117857 | .090082 | .062320 |
| 116 | .119106 | .090377 | .061664 | .033014 | .004471 | -.023919 |
| 118 | .034314 | .004780 | -.024593 | -.053760 | -.082674 | -.111289 |
| | | | | | | |
| 120 | -.052543 | -.082487 | -.112118 | -.141388 | -.170249 | -.198654 |
| 122 | -.140439 | -.170371 | -.199828 | -.228762 | -.257124 | -.284868 |
| 124 | -.228320 | -.257794 | -.286625 | -.314764 | -.342163 | -.368777 |
| 126 | -.315113 | -.343665 | -.371400 | -.398270 | -.424229 | -.449235 |
| 128 | -.399743 | -.426893 | -.453049 | -.478166 | -.502201 | -.525113 |
| 130 | -.481134 | -.506393 | -.530480 | -.553355 | -.574979 | -.595314 |
| 132 | -.558222 | -.581095 | -.602622 | -.622767 | -.641496 | -.658777 |
| 134 | -.629964 | -.649957 | -.668435 | -.685368 | -.700727 | -.714490 |
| 136 | -.695344 | -.711968 | -.726917 | -.740168 | -.751700 | -.761498 |
| 138 | -.753381 | -.766159 | -.777114 | -.786230 | -.793497 | -.798908 |
| 140 | -.803135 | -.811606 | -.818120 | -.822673 | -.825263 | -.825896 |
| 142 | -.843710 | -.847434 | -.849087 | -.848675 | -.846210 | -.841709 |
| 144 | -.874256 | -.872821 | -.869222 | -.863478 | -.855617 | -.845668 |
| 146 | -.893972 | -.886995 | -.877787 | -.866384 | -.852828 | -.837163 |
| 148 | -.902099 | -.889231 | -.874099 | -.856752 | -.837248 | -.815649 |
| | | | | | | |
| 150 | -.897911 | -.878847 | -.857515 | -.833986 | -.808334 | -.780638 |
| 152 | -.880711 | -.855182 | -.827424 | -.797525 | -.765578 | -.731680 |
| 154 | -.849800 | -.817585 | -.783221 | -.746816 | -.708484 | -.668341 |
| 156 | -.804452 | -.765373 | -.724274 | -.681282 | -.636534 | -.590166 |
| 158 | -.743865 | -.697789 | -.649874 | -.600271 | -.549135 | -.496625 |
| 160 | -.667086 | -.613924 | -.559161 | -.502974 | -.445539 | -.387037 |
| 162 | -.572903 | -.512601 | -.451004 | -.388313 | -.324725 | -.260445 |
| 164 | -.459657 | -.392191 | -.323812 | -.254741 | -.185203 | -.115423 |
| 166 | -.324940 | -.250300 | -.175213 | -.099929 | -.024692 | .050251 |
| 168 | -.165044 | -.083208 | -.001497 | .079815 | .160461 | .240172 |
| 170 | .026092 | .115202 | .203486 | .290645 | .376385 | .460420 |
| 172 | .259148 | .355755 | .450658 | .543533 | .634062 | .721939 |
| 174 | .555021 | .659680 | .761496 | .860117 | .955202 | 1.046425 |
| 176 | .962230 | 1.076339 | 1.186010 | 1.290854 | 1.390507 | 1.484623 |
| 178 | 1.639424 | 1.767250 | 1.887942 | 2.001067 | 2.106227 | 2.203052 |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 3.00 | 3.02 | 3.04 | 3.06 | 3.08 | 3.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.203052 | 2.197275 | 2.191529 | 2.185816 | 2.180130 | 2.174477 |
| 4 | 1.484623 | 1.478618 | 1.472644 | 1.466701 | 1.460787 | 1.454903 |
| 6 | 1.046425 | 1.040153 | 1.033911 | 1.027701 | 1.021519 | 1.015367 |
| 8 | .721939 | .715403 | .708898 | .702424 | .695980 | .689567 |
| 10 | .460420 | .453655 | .446923 | .440223 | .433554 | .426917 |
| 12 | .240172 | .233239 | .226341 | .219478 | .212648 | .205853 |
| 14 | .050251 | .043232 | .036253 | .029311 | .022407 | .015540 |
| 16 | -.115423 | -.122426 | -.129386 | -.136304 | -.143179 | -.150012 |
| 18 | -.260445 | -.267319 | -.274144 | -.280920 | -.287648 | -.294328 |
| 20 | -.387037 | -.393656 | -.400219 | -.406726 | -.413178 | -.419574 |
| 22 | -.496625 | -.502856 | -.509023 | -.515126 | -.521164 | -.527140 |
| 24 | -.590166 | -.595872 | -.601504 | -.607063 | -.612549 | -.617962 |
| 26 | -.668341 | -.673383 | -.678342 | -.683217 | -.688010 | -.692720 |
| 28 | -.731680 | -.735922 | -.740070 | -.744125 | -.748088 | -.751957 |
| 30 | -.780638 | -.783949 | -.787156 | -.790260 | -.793260 | -.796158 |
| 32 | -.815649 | -.817907 | -.820051 | -.822082 | -.823999 | -.825805 |
| 34 | -.837163 | -.838257 | -.839228 | -.840076 | -.840803 | -.841408 |
| 36 | -.845668 | -.845502 | -.845205 | -.844777 | -.844219 | -.843532 |
| 38 | -.841709 | -.840204 | -.838560 | -.836780 | -.834863 | -.832811 |
| 40 | -.825896 | -.822991 | -.819943 | -.816753 | -.813424 | -.809956 |
| 42 | -.798908 | -.794564 | -.790075 | -.785443 | -.780669 | -.775755 |
| 44 | -.761498 | -.755699 | -.749756 | -.743671 | -.737446 | -.731083 |
| 46 | -.714490 | -.707244 | -.699859 | -.692336 | -.684678 | -.676887 |
| 48 | -.658777 | -.650118 | -.641327 | -.632407 | -.623360 | -.614189 |
| 50 | -.595314 | -.585301 | -.575168 | -.564917 | -.554553 | -.544078 |
| 52 | -.525113 | -.513831 | -.502444 | -.490957 | -.479372 | -.467695 |
| 54 | -.449234 | -.436793 | -.424268 | -.411662 | -.398982 | -.386230 |
| 56 | -.368777 | -.355311 | -.341786 | -.328207 | -.314579 | -.300906 |
| 58 | -.284868 | -.270536 | -.256175 | -.241789 | -.227385 | -.212967 |
| 60 | -.198654 | -.183637 | -.168623 | -.153620 | -.138633 | -.123667 |
| 62 | -.111288 | -.095785 | -.080323 | -.064910 | -.049552 | -.034256 |
| 64 | -.023919 | -.008146 | .007541 | .023139 | .038639 | .054035 |
| 66 | .062320 | .078130 | .093811 | .109355 | .124756 | .140007 |
| 68 | .146327 | .161931 | .177358 | .192600 | .207651 | .222504 |
| 70 | .227035 | .242182 | .257102 | .271788 | .286231 | .300427 |
| 72 | .303427 | .317863 | .332020 | .345891 | .359468 | .372747 |
| 74 | .374551 | .388020 | .401157 | .413957 | .426412 | .438517 |
| 76 | .439522 | .451772 | .463638 | .475116 | .486199 | .496883 |
| 78 | .497538 | .508324 | .518677 | .528591 | .538063 | .547088 |
| 80 | .547885 | .556974 | .565583 | .573708 | .581345 | .588491 |
| 82 | .589944 | .597120 | .603773 | .609898 | .615496 | .620563 |
| 84 | .623201 | .628268 | .632771 | .636712 | .640088 | .642902 |
| 86 | .647250 | .650033 | .652222 | .653816 | .654819 | .655231 |
| 88 | .661797 | .662152 | .661886 | .661005 | .659510 | .657407 |
| 90 | .666666 | .664477 | .661651 | .658194 | .654113 | .649416 |

| $\nu$ | 3.00 | 3.02 | 3.04 | 3.06 | 3.08 | 3.10 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .666666 | .664477 | .661651 | .658194 | .654113 | .649416 |
| 92 | .661797 | .656982 | .651524 | .645431 | .638712 | .631378 |
| 94 | .647250 | .639764 | .631639 | .622885 | .613516 | .603545 |
| 96 | .623201 | .613038 | .602251 | .590855 | .578864 | .566296 |
| 98 | .589944 | .577138 | .563736 | .549755 | .535214 | .520133 |
| 100 | .547885 | .532512 | .516583 | .500119 | .483143 | .465677 |
| 102 | .497538 | .479717 | .461393 | .442591 | .423337 | .403658 |
| 104 | .439522 | .419413 | .398868 | .377916 | .356587 | .334909 |
| 106 | .374551 | .352356 | .329808 | .306937 | .283775 | .260356 |
| 108 | .303427 | .279392 | .255097 | .230578 | .205868 | .181004 |
| 110 | .227034 | .201443 | .175699 | .149841 | .123906 | .097931 |
| 112 | .146327 | .119500 | .092642 | .065791 | .038987 | .012271 |
| 114 | .062320 | .034616 | .007010 | -.020454 | -.047737 | -.074797 |
| 116 | -.023919 | -.052114 | -.080068 | -.107740 | -.135086 | -.162064 |
| 118 | -.111289 | -.139557 | -.167436 | -.194882 | -.221850 | -.248301 |
| 120 | -.198654 | -.226558 | -.253915 | -.280682 | -.306816 | -.332277 |
| 122 | -.284868 | -.311948 | -.338320 | -.363942 | -.388771 | -.412770 |
| 124 | -.368777 | -.394562 | -.419474 | -.443474 | -.466523 | -.488583 |
| 126 | -.449235 | -.473243 | -.496216 | -.518116 | -.538906 | -.558554 |
| 128 | -.525113 | -.546864 | -.567417 | -.586739 | -.604800 | -.621571 |
| 130 | -.595314 | -.614327 | -.631987 | -.648266 | -.663138 | -.676582 |
| 132 | -.658777 | -.674582 | -.688888 | -.701672 | -.712916 | -.722605 |
| 134 | -.714490 | -.726634 | -.737143 | -.746004 | -.753205 | -.758741 |
| 136 | -.761498 | -.769549 | -.775844 | -.780381 | -.783157 | -.784177 |
| 138 | -.798908 | -.802461 | -.804158 | -.804005 | -.802012 | -.798193 |
| 140 | -.825896 | -.824581 | -.821330 | -.816163 | -.809101 | -.800170 |
| 142 | -.841709 | -.835195 | -.826692 | -.816232 | -.803851 | -.789587 |
| 144 | -.845668 | -.833668 | -.819656 | -.803677 | -.785782 | -.766025 |
| 146 | -.837163 | -.819440 | -.799716 | -.778049 | -.754507 | -.729157 |
| 148 | -.815649 | -.792022 | -.766440 | -.738978 | -.709718 | -.678746 |
| 150 | -.780638 | -.750984 | -.719460 | -.686160 | -.651183 | -.614631 |
| 152 | -.731680 | -.695936 | -.658453 | -.619343 | -.578721 | -.536707 |
| 154 | -.668341 | -.626511 | -.583121 | -.538299 | -.492180 | -.444900 |
| 156 | -.590166 | -.542321 | -.493144 | -.442785 | -.391396 | -.339129 |
| 158 | -.496625 | -.442905 | -.388139 | -.332495 | -.276142 | -.219252 |
| 160 | -.387037 | -.327652 | -.267567 | -.206970 | -.146048 | -.084986 |
| 162 | -.260445 | -.195676 | -.130622 | -.065486 | -.000474 | .064214 |
| 164 | -.115423 | -.045623 | .023973 | .093145 | .161673 | .229343 |
| 166 | .050251 | .124657 | .198285 | .270899 | .342265 | .412156 |
| 168 | .240172 | .318686 | .395747 | .471103 | .544508 | .615728 |
| 170 | .460420 | .542470 | .622261 | .699533 | .774029 | .845508 |
| 172 | .721939 | .806867 | .888563 | .966752 | 1.041175 | 1.111589 |
| 174 | 1.046425 | 1.133474 | 1.216055 | 1.293891 | 1.366718 | 1.434300 |
| 176 | 1.484623 | 1.572877 | 1.654969 | 1.730620 | 1.799575 | 1.861608 |
| 178 | 2.203052 | 2.291206 | 2.370385 | 2.440324 | 2.500784 | 2.551576 |
| 180 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 3.10 | 3.12 | 3.14 | 3.16 | 3.18 | 3.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.174477 | 2.168853 | 2.163258 | 2.157694 | 2.152157 | 2.146649 |
| 4 | 1.454903 | 1.449048 | 1.443223 | 1.437426 | 1.431658 | 1.425918 |
| 6 | 1.015367 | 1.009245 | 1.003151 | .997087 | .991050 | .985042 |
| 8 | .689567 | .683183 | .676829 | .670503 | .664207 | .657939 |
| 10 | .426917 | .420311 | .413735 | .407191 | .400677 | .394193 |
| 12 | .205853 | .199091 | .192362 | .185667 | .179004 | .172374 |
| 14 | .015540 | .008710 | .001918 | -.004837 | -.011557 | -.018239 |
| 16 | -.150012 | -.156803 | -.163552 | -.170259 | -.176925 | -.183550 |
| 18 | -.294328 | -.300959 | -.307543 | -.314079 | -.320567 | -.327008 |
| 20 | -.419574 | -.425915 | -.432200 | -.438431 | -.444607 | -.450729 |
| 22 | -.527140 | -.533051 | -.538900 | -.544685 | -.550407 | -.556067 |
| 24 | -.617962 | -.623303 | -.628571 | -.633768 | -.638891 | -.643944 |
| 26 | -.692720 | -.697349 | -.701895 | -.706359 | -.710741 | -.715042 |
| 28 | -.751957 | -.755735 | -.759420 | -.763013 | -.766515 | -.769925 |
| 30 | -.796158 | -.798954 | -.801648 | -.804239 | -.806730 | -.809119 |
| 32 | -.825805 | -.827498 | -.829080 | -.830551 | -.831911 | -.833161 |
| 34 | -.841408 | -.841892 | -.842256 | -.842501 | -.842626 | -.842634 |
| 36 | -.843532 | -.842717 | -.841774 | -.840705 | -.839510 | -.838190 |
| 38 | -.832811 | -.830626 | -.828307 | -.825857 | -.823275 | -.820564 |
| 40 | -.809956 | -.806350 | -.802608 | -.798731 | -.794720 | -.790578 |
| 42 | -.775755 | -.770703 | -.765514 | -.760191 | -.754733 | -.749145 |
| 44 | -.731083 | -.724583 | -.717949 | -.711184 | -.704289 | -.697266 |
| 46 | -.676887 | -.668965 | -.660916 | -.652741 | -.644443 | -.636026 |
| 48 | -.614189 | -.604898 | -.595489 | -.585965 | -.576329 | -.566585 |
| 50 | -.544078 | -.533496 | -.522810 | -.512025 | -.501143 | -.490168 |
| 52 | -.467695 | -.455929 | -.444078 | -.432147 | -.420138 | -.408056 |
| 54 | -.386230 | -.373413 | -.360533 | -.347597 | -.334607 | -.321569 |
| 56 | -.300906 | -.287194 | -.273448 | -.259673 | -.245873 | -.232054 |
| 58 | -.212967 | -.198542 | -.184114 | -.169690 | -.155274 | -.140872 |
| 60 | -.123667 | -.108730 | -.093827 | -.078963 | -.064145 | -.049378 |
| 62 | -.034256 | -.019027 | -.003871 | .011203 | .026192 | .041088 |
| 64 | .054035 | .069321 | .084489 | .099533 | .114447 | .129225 |
| 66 | .140007 | .155101 | .170032 | .184793 | .199377 | .213778 |
| 68 | .222504 | .237151 | .251586 | .265803 | .279795 | .293556 |
| 70 | .300427 | .314367 | .328045 | .341456 | .354592 | .367449 |
| 72 | .372747 | .385720 | .398381 | .410724 | .422744 | .434436 |
| 74 | .438517 | .450267 | .461655 | .472677 | .483327 | .493601 |
| 76 | .496883 | .507162 | .517031 | .526488 | .535526 | .544143 |
| 78 | .547088 | .555663 | .563783 | .571445 | .578646 | .585384 |
| 80 | .588491 | .595144 | .601301 | .606960 | .612121 | .616781 |
| 82 | .620563 | .625100 | .629104 | .632577 | .635518 | .637927 |
| 84 | .642902 | .645153 | .646842 | .647972 | .648544 | .648560 |
| 86 | .655231 | .655058 | .654300 | .652963 | .651050 | .648566 |
| 88 | .657407 | .654702 | .651400 | .647506 | .643029 | .637975 |
| 90 | .649416 | .644109 | .638203 | .631704 | .624622 | .616968 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 3.10 | 3.12 | 3.14 | 3.16 | 3.18 | 3.20 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .649416 | .644109 | .638203 | .631703 | .624622 | .616968 |
| 92 | .631378 | .623440 | .614908 | .605794 | .596110 | .585869 |
| 94 | .603545 | .592985 | .581850 | .570154 | .557913 | .545143 |
| 96 | .566296 | .553166 | .539493 | .525294 | .510587 | .495390 |
| 98 | .520133 | .504531 | .488430 | .471849 | .454810 | .437335 |
| 100 | .465677 | .447744 | .429368 | .410573 | .391384 | .371824 |
| 102 | .403658 | .383579 | .363127 | .342330 | .321214 | .299808 |
| 104 | .334909 | .312913 | .290626 | .268081 | .245306 | .222332 |
| 106 | .260356 | .236711 | .212873 | .188875 | .164748 | .140527 |
| 108 | .181004 | .156021 | .130952 | .105834 | .080701 | .055588 |
| 110 | .097931 | .071955 | .046013 | .020143 | -.005617 | -.031234 |
| 112 | .012271 | -.014319 | -.040745 | -.066967 | -.092949 | -.118653 |
| 114 | -.074797 | -.101593 | -.128086 | -.154237 | -.180007 | -.205359 |
| 116 | -.162064 | -.188633 | -.214754 | -.240387 | -.265494 | -.290038 |
| 118 | -.248301 | -.274192 | -.299484 | -.324138 | -.348118 | -.371387 |
| | | | | | | |
| 120 | -.332277 | -.357024 | -.381018 | -.404224 | -.426605 | -.448128 |
| 122 | -.412770 | -.435899 | -.458123 | -.479407 | -.499719 | -.519027 |
| 124 | -.488583 | -.509620 | -.529601 | -.548494 | -.566272 | -.582907 |
| 126 | -.558554 | -.577029 | -.594302 | -.610347 | -.625140 | -.638660 |
| 128 | -.621571 | -.637026 | -.651142 | -.663898 | -.675278 | -.685265 |
| 130 | -.676582 | -.688577 | -.699108 | -.708161 | -.715725 | -.721794 |
| 132 | -.722605 | -.730728 | -.737275 | -.742241 | -.745624 | -.747426 |
| 134 | -.758741 | -.762609 | -.764808 | -.765343 | -.764222 | -.761455 |
| 136 | -.784177 | -.783446 | -.780976 | -.776782 | -.770881 | -.763295 |
| 138 | -.798193 | -.792567 | -.785155 | -.775984 | -.765083 | -.752486 |
| 140 | -.800170 | -.789401 | -.776829 | -.762491 | -.746432 | -.728696 |
| 142 | -.789587 | -.773486 | -.755594 | -.735965 | -.714654 | -.691720 |
| 144 | -.766025 | -.744463 | -.721159 | -.696179 | -.669595 | -.641478 |
| 146 | -.729157 | -.702073 | -.673333 | -.643019 | -.611214 | -.578008 |
| 148 | -.678746 | -.646151 | -.612026 | -.576468 | -.539577 | -.501455 |
| | | | | | | |
| 150 | -.614631 | -.576610 | -.537228 | -.496599 | -.454837 | -.412059 |
| 152 | -.536707 | -.493423 | -.448995 | -.403550 | -.357218 | -.310131 |
| 154 | -.444900 | -.396599 | -.347418 | -.297500 | -.246989 | -.196030 |
| 156 | -.339129 | -.286142 | -.232589 | -.178630 | -.124422 | -.070123 |
| 158 | -.219252 | -.161996 | -.104545 | -.047070 | .010256 | .067266 |
| 160 | -.084986 | -.023971 | .036810 | .097175 | .156942 | .215932 |
| 162 | .064214 | .128378 | .191820 | .254346 | .315764 | .375889 |
| 164 | .229343 | .295940 | .361259 | .425096 | .487255 | .547544 |
| 166 | .412156 | .480350 | .546632 | .610794 | .672636 | .731966 |
| 168 | .615728 | .684532 | .750701 | .814027 | .874309 | .931360 |
| 170 | .845508 | .913739 | .978500 | 1.039587 | 1.096805 | 1.149974 |
| 172 | 1.111589 | 1.177763 | 1.239483 | 1.296552 | 1.348788 | 1.396030 |
| 174 | 1.434300 | 1.496412 | 1.552856 | 1.603451 | 1.648038 | 1.686483 |
| 176 | 1.861608 | 1.916516 | 1.964126 | 2.004289 | 2.036884 | 2.061822 |
| 178 | 2.551576 | 2.592535 | 2.623541 | 2.644511 | 2.655396 | 2.656190 |
| | | | | | | |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos \theta)$$

| ν | 3.20 | 3.22 | 3.24 | 3.26 | 3.28 | 3.30 |
|---|------|------|------|------|------|------|
| θ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.146649 | 2.141170 | 2.135719 | 2.130295 | 2.124899 | 2.119529 |
| 4 | 1.425918 | 1.420206 | 1.414521 | 1.408863 | 1.403233 | 1.397629 |
| 6 | .985042 | .979061 | .973108 | .967182 | .961283 | .955409 |
| 8 | .657939 | .651700 | .645488 | .639304 | .633148 | .627019 |
| 10 | .394193 | .387739 | .381314 | .374918 | .368552 | .362213 |
| 12 | .172374 | .165776 | .159211 | .152677 | .146175 | .139704 |
| 14 | -.018239 | -.024886 | -.031498 | -.038074 | -.044613 | -.051119 |
| 16 | -.183550 | -.190134 | -.196677 | -.203180 | -.209642 | -.216064 |
| 18 | -.327008 | -.333402 | -.339750 | -.346050 | -.352304 | -.358511 |
| 20 | -.450729 | -.456796 | -.462809 | -.468768 | -.474673 | -.480524 |
| 22 | -.556067 | -.561663 | -.567198 | -.572670 | -.578079 | -.583427 |
| 24 | -.643944 | -.648924 | -.653833 | -.658670 | -.663437 | -.668132 |
| 26 | -.715042 | -.719261 | -.723400 | -.727457 | -.731434 | -.735330 |
| 28 | -.769925 | -.773244 | -.776473 | -.779611 | -.782659 | -.785616 |
| 30 | -.809119 | -.811408 | -.813596 | -.815685 | -.817673 | -.819563 |
| 32 | -.833161 | -.834301 | -.835332 | -.836254 | -.837068 | -.837774 |
| 34 | -.842634 | -.842523 | -.842296 | -.841952 | -.841492 | -.840917 |
| 36 | -.838190 | -.836746 | -.835178 | -.833488 | -.831676 | -.829744 |
| 38 | -.820564 | -.817724 | -.814757 | -.811663 | -.808444 | -.805100 |
| 40 | -.790578 | -.786305 | -.781902 | -.777372 | -.772715 | -.767933 |
| 42 | -.749145 | -.743426 | -.737579 | -.731606 | -.725508 | -.719288 |
| 44 | -.697266 | -.690117 | -.682844 | -.675451 | -.667938 | -.660308 |
| 46 | -.636026 | -.627490 | -.618839 | -.610076 | -.601202 | -.592222 |
| 48 | -.566585 | -.556734 | -.546781 | -.536728 | -.526578 | -.516335 |
| 50 | -.490168 | -.479103 | -.467953 | -.456719 | -.445407 | -.434019 |
| 52 | -.408056 | -.395905 | -.383690 | -.371413 | -.359079 | -.346693 |
| 54 | -.321569 | -.308487 | -.295366 | -.282210 | -.269023 | -.255810 |
| 56 | -.232054 | -.218221 | -.204378 | -.190531 | -.176684 | -.162843 |
| 58 | -.140872 | -.126489 | -.112132 | -.097804 | -.083511 | -.069259 |
| 60 | -.049378 | -.034669 | -.020022 | -.005443 | .009060 | .023486 |
| 62 | .041088 | .055886 | .070580 | .085164 | .099633 | .113979 |
| 64 | .129225 | .143861 | .158348 | .172680 | .186852 | .200858 |
| 66 | .213778 | .227990 | .242008 | .255824 | .269433 | .282830 |
| 68 | .293556 | .307080 | .320362 | .333394 | .346172 | .358690 |
| 70 | .367449 | .380020 | .392300 | .404283 | .415964 | .427338 |
| 72 | .434436 | .445793 | .456812 | .467486 | .477812 | .487785 |
| 74 | .493601 | .503494 | .513001 | .522120 | .530846 | .539175 |
| 76 | .544143 | .552334 | .560097 | .567429 | .574326 | .580788 |
| 78 | .585384 | .591656 | .597461 | .602796 | .607661 | .612054 |
| 80 | .616781 | .620940 | .624597 | .627752 | .630406 | .632559 |
| 82 | .637927 | .639806 | .641155 | .641977 | .642274 | .642047 |
| 84 | .648560 | .648025 | .646939 | .645309 | .643138 | .640430 |
| 86 | .648566 | .645516 | .641906 | .637742 | .633031 | .627778 |
| 88 | .637975 | .632351 | .626166 | .619428 | .612147 | .604331 |
| 90 | .616968 | .608752 | .599983 | .590674 | .580836 | .570482 |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 3.20 | 3.22 | 3.24 | 3.26 | 3.28 | 3.30 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .616968 | .608751 | .599983 | .590674 | .580836 | .570481 |
| 92 | .585869 | .575084 | .563769 | .551936 | .539602 | .526781 |
| 94 | .545143 | .531859 | .518079 | .503818 | .489094 | .473924 |
| 96 | .495390 | .479723 | .463605 | .447056 | .430096 | .412745 |
| 98 | .437335 | .419446 | .401165 | .382515 | .363519 | .344200 |
| 100 | .371824 | .351919 | .331695 | .311176 | .290389 | .269359 |
| 102 | .299808 | .278138 | .256233 | .234121 | .211831 | .189390 |
| 104 | .222332 | .199190 | .175909 | .152521 | .129055 | .105542 |
| 106 | .140527 | .116243 | .091929 | .067618 | .043341 | .019131 |
| 108 | .055588 | .030529 | .005559 | -.019288 | -.043979 | -.068480 |
| 110 | -.031234 | -.056669 | -.081889 | -.106857 | -.131540 | -.155903 |
| 112 | -.118653 | -.144041 | -.169079 | -.193730 | -.217960 | -.241735 |
| 114 | -.205359 | -.230255 | -.254660 | -.278539 | -.301857 | -.324582 |
| 116 | -.290038 | -.313982 | -.337291 | -.359932 | -.381871 | -.403078 |
| 118 | -.371387 | -.393910 | -.415654 | -.436588 | -.456680 | -.475902 |
| 120 | -.448128 | -.468760 | -.488471 | -.507232 | -.525015 | -.541795 |
| 122 | -.519027 | -.537304 | -.554521 | -.570654 | -.585680 | -.599578 |
| 124 | -.582907 | -.598375 | -.612654 | -.625724 | -.637567 | -.648168 |
| 126 | -.638660 | -.650888 | -.661808 | -.671405 | -.679668 | -.686589 |
| 128 | -.685265 | -.693848 | -.701017 | -.706765 | -.711089 | -.713987 |
| 130 | -.721794 | -.726361 | -.729427 | -.730993 | -.731062 | -.729643 |
| 132 | -.747426 | -.747650 | -.746305 | -.743401 | -.738953 | -.732976 |
| 134 | -.761455 | -.757057 | -.751045 | -.743440 | -.734268 | -.723554 |
| 136 | -.763295 | -.754050 | -.743174 | -.730699 | -.716661 | -.701099 |
| 138 | -.752486 | -.738231 | -.722357 | -.704910 | -.685935 | -.665486 |
| 140 | -.728696 | -.709335 | -.688400 | -.665949 | -.642043 | -.616743 |
| 142 | -.691720 | -.667228 | -.641244 | -.613837 | -.585080 | -.555049 |
| 144 | -.641478 | -.611908 | -.580963 | -.548727 | -.515286 | -.480729 |
| 146 | -.578008 | -.543492 | -.507758 | -.470906 | -.433033 | -.394240 |
| 148 | -.501455 | -.462209 | -.421945 | -.380775 | -.338809 | -.296162 |
| 150 | -.412059 | -.368385 | -.323937 | -.278837 | -.233210 | -.187180 |
| 152 | -.310131 | -.262422 | -.214226 | -.165678 | -.116911 | -.068063 |
| 154 | -.196030 | -.144771 | -.093356 | -.041932 | .009355 | .060362 |
| 156 | -.070123 | -.015892 | .038115 | .091744 | .144840 | .197252 |
| 158 | .067266 | .123791 | .179667 | .234729 | .288819 | .341779 |
| 160 | .215932 | .273968 | .330880 | .386498 | .440659 | .493206 |
| 162 | .375889 | .434539 | .491538 | .546717 | .599910 | .650962 |
| 164 | .547544 | .605780 | .661786 | .715393 | .766441 | .814778 |
| 166 | .731966 | .788601 | .842369 | .893106 | .940660 | .984888 |
| 168 | .931360 | .985001 | 1.035070 | 1.081414 | 1.123893 | 1.162383 |
| 170 | 1.149974 | 1.198931 | 1.243526 | 1.283624 | 1.319108 | 1.349875 |
| 172 | 1.396030 | 1.438132 | 1.474968 | 1.506429 | 1.532431 | 1.552902 |
| 174 | 1.686483 | 1.718671 | 1.744513 | 1.763939 | 1.776908 | 1.783395 |
| 176 | 2.061822 | 2.079038 | 2.088498 | 2.090196 | 2.084155 | 2.070424 |
| 178 | 2.656190 | 2.646923 | 2.627660 | 2.598509 | 2.559610 | 2.511141 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 3.30 | 3.32 | 3.34 | 3.36 | 3.38 | 3.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 2 | 2.119529 | 2.114188 | 2.108872 | 2.103582 | 2.098319 | 2.093081 |
| 4 | 1.397629 | 1.392051 | 1.386500 | 1.380975 | 1.375475 | 1.370000 |
| 6 | .955409 | .949563 | .943743 | .937948 | .932179 | .926436 |
| 8 | .627019 | .620917 | .614842 | .608793 | .602771 | .596774 |
| 10 | .362213 | .355905 | .349623 | .343370 | .337145 | .330948 |
| 12 | .139704 | .133264 | .126855 | .120478 | .114130 | .107813 |
| 14 | -.051119 | -.057589 | -.064024 | -.070425 | -.076791 | -.083123 |
| 16 | -.216064 | -.222446 | -.228788 | -.235090 | -.241353 | -.247577 |
| 18 | -.358511 | -.364672 | -.370787 | -.376856 | -.382880 | -.388857 |
| 20 | -.480524 | -.486321 | -.492065 | -.497756 | -.503394 | -.508979 |
| 22 | -.583427 | -.588713 | -.593937 | -.599099 | -.604201 | -.609240 |
| 24 | -.668132 | -.672756 | -.677310 | -.681793 | -.686206 | -.690548 |
| 26 | -.735330 | -.739146 | -.742882 | -.746538 | -.750115 | -.753612 |
| 28 | -.785616 | -.788484 | -.791262 | -.793951 | -.796551 | -.799063 |
| 30 | -.819563 | -.821353 | -.823045 | -.824639 | -.826135 | -.827533 |
| 32 | -.837774 | -.838373 | -.838865 | -.839250 | -.839530 | -.839704 |
| 34 | -.840917 | -.840228 | -.839425 | -.838509 | -.837480 | -.836339 |
| 36 | -.829744 | -.827691 | -.825520 | -.823230 | -.820823 | -.818300 |
| 38 | -.805100 | -.801633 | -.798045 | -.794335 | -.790506 | -.786558 |
| 40 | -.767933 | -.763027 | -.757999 | -.752850 | -.747582 | -.742196 |
| 42 | -.719288 | -.712946 | -.706485 | -.699907 | -.693213 | -.686406 |
| 44 | -.660308 | -.652563 | -.644705 | -.636737 | -.628661 | -.620478 |
| 46 | -.592222 | -.583136 | -.573948 | -.564660 | -.555276 | -.545797 |
| 48 | -.516335 | -.506001 | -.495580 | -.485074 | -.474487 | -.463821 |
| 50 | -.434019 | -.422559 | -.411030 | -.399437 | -.387782 | -.376069 |
| 52 | -.346693 | -.334257 | -.321776 | -.309254 | -.296695 | -.284103 |
| 54 | -.255810 | -.242576 | -.229324 | -.216060 | -.202787 | -.189510 |
| 56 | -.162843 | -.149011 | -.135194 | -.121397 | -.107624 | -.093881 |
| 58 | -.069259 | -.055053 | -.040898 | -.026799 | -.012760 | .001211 |
| 60 | .023486 | .037826 | .052075 | .066229 | .080282 | .094229 |
| 62 | .113979 | .128198 | .142285 | .156233 | .170037 | .183692 |
| 64 | .200858 | .214691 | .228348 | .241821 | .255106 | .268197 |
| 66 | .282830 | .296008 | .308963 | .321689 | .334180 | .346433 |
| 68 | .358690 | .370944 | .382926 | .394634 | .406061 | .417203 |
| 70 | .427338 | .438400 | .449146 | .459571 | .469671 | .479441 |
| 72 | .487785 | .497401 | .506656 | .515547 | .524069 | .532220 |
| 74 | .539175 | .547104 | .554631 | .561752 | .568466 | .574769 |
| 76 | .580788 | .586810 | .592392 | .597533 | .602230 | .606483 |
| 78 | .612054 | .615974 | .619422 | .622397 | .624899 | .626930 |
| 80 | .632559 | .634211 | .635366 | .636023 | .636185 | .635854 |
| 82 | .642047 | .641301 | .640038 | .638261 | .635975 | .633184 |
| 84 | .640430 | .637190 | .633424 | .629138 | .624337 | .619028 |
| 86 | .627778 | .621993 | .615682 | .608852 | .601515 | .593676 |
| 88 | .604331 | .595990 | .587135 | .577776 | .567924 | .557591 |
| 90 | .570482 | .559623 | .548272 | .536443 | .524150 | .511406 |

$$Q_\nu(\cos \theta)$$

| $\nu$ | 3.30 | 3.32 | 3.34 | 3.36 | 3.38 | 3.40 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .570481 | .559622 | .548272 | .536443 | .524150 | .511406 |
| 92 | .526781 | .513487 | .499737 | .485547 | .470933 | .455911 |
| 94 | .473924 | .458328 | .442323 | .425928 | .409162 | .392044 |
| 96 | .412745 | .395025 | .376957 | .358561 | .339860 | .320875 |
| 98 | .344200 | .324582 | .304688 | .284542 | .264169 | .161484 |
| 100 | .269359 | .248112 | .226675 | .205074 | .183335 | .161484 |
| 102 | .189390 | .166827 | .144170 | .121448 | .098688 | .075920 |
| 104 | .105542 | .082013 | .058498 | .035025 | .011627 | -.011668 |
| 106 | .019131 | -.004979 | -.028959 | -.052779 | -.076406 | -.099810 |
| 108 | -.068480 | -.092760 | -.116784 | -.140522 | -.163941 | -.187012 |
| 110 | -.155903 | -.179914 | -.203538 | -.226746 | -.249505 | -.271785 |
| 112 | -.241735 | -.265023 | -.287790 | -.310006 | -.331640 | -.352663 |
| 114 | -.324582 | -.346682 | -.368125 | -.388882 | -.408924 | -.428225 |
| 116 | -.403078 | -.423522 | -.443174 | -.462007 | -.479995 | -.497114 |
| 118 | -.475902 | -.494226 | -.511627 | -.528081 | -.543565 | -.558058 |
| 120 | -.541795 | -.557549 | -.572254 | -.585891 | -.598442 | -.609890 |
| 122 | -.599578 | -.612329 | -.623917 | -.634326 | -.643545 | -.651562 |
| 124 | -.648168 | -.657513 | -.665592 | -.672397 | -.677921 | -.682160 |
| 126 | -.686589 | -.692160 | -.696379 | -.699244 | -.700757 | -.700921 |
| 128 | -.713987 | -.715461 | -.715515 | -.714156 | -.711393 | -.707239 |
| 130 | -.729643 | -.726745 | -.722383 | -.716571 | -.709329 | -.700679 |
| 132 | -.732976 | -.725491 | -.716521 | -.706093 | -.694234 | -.680977 |
| 134 | -.723554 | -.711330 | -.697630 | -.682490 | -.665949 | -.648051 |
| 136 | -.701099 | -.684055 | -.665573 | -.645701 | -.624490 | -.601994 |
| 138 | -.665486 | -.643613 | -.620376 | -.595833 | -.570045 | -.543078 |
| 140 | -.616743 | -.590116 | -.562231 | -.533158 | -.502972 | -.471749 |
| 142 | -.555049 | -.523823 | -.491483 | -.458111 | -.423793 | -.388616 |
| 144 | -.480729 | -.445146 | -.408631 | -.371278 | -.333183 | -.294444 |
| 146 | -.394240 | -.354631 | -.314310 | -.273383 | -.231957 | -.190140 |
| 148 | -.296162 | -.252947 | -.209281 | -.165280 | -.121059 | -.076736 |
| 150 | -.187180 | -.140872 | -.094412 | -.047926 | -.001538 | .044627 |
| 152 | -.068063 | -.019267 | .029341 | .077630 | .125469 | .172727 |
| 154 | .060362 | .110948 | .160969 | .210288 | .258769 | .306278 |
| 156 | .197252 | .248831 | .299433 | .348914 | .397138 | .443969 |
| 158 | .341779 | .393459 | .443711 | .492391 | .539363 | .584495 |
| 160 | .493206 | .543986 | .592852 | .639664 | .684289 | .726602 |
| 162 | .650962 | .699723 | .746051 | .789812 | .830883 | .869146 |
| 164 | .814778 | .860263 | .902761 | .942152 | .978323 | 1.011173 |
| 166 | .984888 | 1.025663 | 1.062864 | 1.096387 | 1.126138 | 1.152036 |
| 168 | 1.162383 | 1.196774 | 1.226964 | 1.252874 | 1.274435 | 1.291593 |
| 170 | 1.349875 | 1.375841 | 1.396935 | 1.413108 | 1.424324 | 1.430565 |
| 172 | 1.552902 | 1.567795 | 1.577079 | 1.580745 | 1.578805 | 1.571286 |
| 174 | 1.783395 | 1.783406 | 1.776964 | 1.764119 | 1.744942 | 1.719526 |
| 176 | 2.070424 | 2.049084 | 2.020241 | 1.984026 | 1.940603 | 1.890156 |
| 178 | 2.511141 | 2.453317 | 2.386384 | 2.310625 | 2.226353 | 2.133912 |
| 180 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |

$$Q_\nu(\cos\theta)$$

| $\nu$ | 3.40 | 3.42 | 3.44 | 3.46 | 3.48 | 3.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 0 | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 2 | 2.093081 | 2.087870 | 2.082683 | 2.077521 | 2.072384 | 2.067272 |
| 4 | 1.370000 | 1.364550 | 1.359126 | 1.353725 | 1.348349 | 1.342998 |
| 6 | .926436 | .920717 | .915023 | .909354 | .903709 | .898088 |
| 8 | .596774 | .590802 | .584857 | .578937 | .573042 | .567172 |
| 10 | .330948 | .324778 | .318635 | .312518 | .306429 | .300366 |
| 12 | .107813 | .101525 | .095269 | .089041 | .082843 | .076674 |
| 14 | -.083123 | -.089421 | -.095686 | -.101916 | -.108113 | -.114277 |
| 16 | -.247577 | -.253762 | -.259907 | -.266014 | -.272082 | -.278111 |
| 18 | -.388857 | -.394789 | -.400676 | -.406518 | -.412314 | -.418066 |
| 20 | -.508979 | -.514511 | -.519989 | -.525416 | -.530790 | -.536112 |
| 22 | -.609240 | -.614219 | -.619136 | -.623993 | -.628789 | -.633524 |
| 24 | -.690548 | -.694821 | -.699023 | -.703156 | -.707219 | -.711213 |
| 26 | -.753612 | -.757029 | -.760368 | -.763627 | -.766808 | -.769911 |
| 28 | -.799063 | -.801486 | -.803820 | -.806067 | -.808226 | -.810298 |
| 30 | -.827533 | -.828834 | -.830039 | -.831147 | -.832159 | -.833076 |
| 32 | -.839704 | -.839774 | -.839739 | -.839601 | -.839359 | -.839014 |
| 34 | -.836339 | -.835088 | -.833726 | -.832254 | -.830673 | -.828984 |
| 36 | -.818300 | -.815661 | -.812908 | -.810042 | -.807062 | -.803971 |
| 38 | -.786558 | -.782493 | -.778312 | -.774016 | -.769606 | -.765084 |
| 40 | -.742196 | -.736694 | -.731077 | -.725347 | -.719505 | -.713553 |
| 42 | -.686406 | -.679486 | -.672456 | -.665318 | -.658074 | -.650726 |
| 44 | -.620478 | -.612192 | -.603804 | -.595317 | -.586733 | -.578054 |
| 46 | -.545797 | -.536227 | -.526567 | -.516822 | -.506992 | -.497082 |
| 48 | -.463821 | -.453080 | -.442267 | -.431385 | -.420437 | -.409426 |
| 50 | -.376069 | -.364301 | -.352483 | -.340617 | -.328708 | -.316758 |
| 52 | -.284103 | -.271482 | -.258835 | -.246168 | -.233482 | -.220784 |
| 54 | -.189510 | -.176234 | -.162962 | -.149699 | -.136450 | -.123218 |
| 56 | -.093881 | -.080171 | -.066500 | -.052872 | -.039292 | -.025765 |
| 58 | .001211 | .015112 | .028937 | .042681 | .056339 | .069907 |
| 60 | .094229 | .108064 | .121783 | .135380 | .148850 | .162189 |
| 62 | .183692 | .197193 | .210535 | .223712 | .236719 | .249552 |
| 64 | .268197 | .281089 | .293777 | .306256 | .318522 | .330569 |
| 66 | .346433 | .358441 | .370200 | .381705 | .392952 | .403937 |
| 68 | .417203 | .428056 | .438616 | .448877 | .458837 | .468490 |
| 70 | .479441 | .488879 | .497979 | .506739 | .515155 | .523225 |
| 72 | .532220 | .539996 | .547395 | .554414 | .561051 | .567304 |
| 74 | .574769 | .580660 | .586138 | .591200 | .595846 | .600075 |
| 76 | .606483 | .610292 | .613655 | .616574 | .619047 | .621077 |
| 78 | .626930 | .628489 | .629579 | .630200 | .630355 | .630046 |
| 80 | .635854 | .635034 | .633726 | .631935 | .629665 | .626919 |
| 82 | .633184 | .629893 | .626107 | .621831 | .617071 | .611833 |
| 84 | .619028 | .613219 | .606916 | .600128 | .592861 | .585125 |
| 86 | .593676 | .585347 | .576537 | .567256 | .557514 | .547322 |
| 88 | .557591 | .546789 | .535530 | .523826 | .511690 | .499135 |
| 90 | .511406 | .498227 | .484626 | .470619 | .456220 | .441447 |

$$Q_\nu(\cos\,\theta)$$

| $\nu$ | 3.40 | 3.42 | 3.44 | 3.46 | 3.48 | 3.50 |
|---|---|---|---|---|---|---|
| $\theta$ | | | | | | |
| 90 | .511406 | .498226 | .484625 | .470618 | .456219 | .441446 |
| 92 | .455911 | .440499 | .424714 | .408574 | .392095 | .375298 |
| 94 | .392044 | .374594 | .356832 | .338777 | .320450 | .301872 |
| 96 | .320875 | .301629 | .282143 | .262441 | .242544 | .222475 |
| 98 | .243592 | .222837 | .201927 | .180887 | .159741 | .138515 |
| 100 | .161484 | .139548 | .117554 | .095527 | .073494 | .051480 |
| 102 | .075920 | .053170 | .030468 | .007840 | -.014684 | -.037080 |
| 104 | -.011668 | -.034832 | -.057834 | -.080646 | -.103241 | -.125589 |
| 106 | -.099810 | -.122961 | -.145830 | -.168387 | -.190604 | -.212453 |
| 108 | -.187012 | -.209703 | -.231987 | -.253832 | -.275213 | -.296100 |
| 110 | -.271785 | -.293556 | -.314790 | -.335459 | -.355536 | -.374994 |
| 112 | -.352663 | -.373048 | -.392765 | -.411791 | -.430099 | -.447665 |
| 114 | -.428225 | -.446757 | -.464496 | -.481419 | -.497504 | -.512729 |
| 116 | -.497114 | -.513339 | -.528651 | -.543028 | -.556453 | -.568908 |
| 118 | -.558058 | -.571541 | -.583997 | -.595411 | -.605768 | -.615056 |
| 120 | -.609890 | -.620222 | -.629426 | -.637490 | -.644407 | -.650171 |
| 122 | -.651562 | -.658369 | -.663961 | -.668333 | -.671484 | -.673414 |
| 124 | -.682160 | -.685114 | -.686782 | -.687169 | -.686279 | -.684121 |
| 126 | -.700921 | -.699742 | -.697230 | -.693396 | -.688252 | -.681816 |
| 128 | -.707239 | -.701710 | -.694821 | -.686594 | -.677051 | -.666217 |
| 130 | -.700679 | -.690644 | -.679253 | -.666533 | -.652518 | -.637242 |
| 132 | -.680977 | -.666356 | -.650409 | -.633173 | -.614692 | -.595010 |
| 134 | -.648051 | -.628838 | -.608361 | -.586667 | -.563810 | -.539843 |
| 136 | -.601994 | -.578267 | -.553369 | -.527359 | -.500301 | -.472260 |
| 138 | -.543078 | -.514999 | -.485876 | -.455781 | -.424787 | -.392969 |
| 140 | -.471749 | -.439567 | -.406504 | -.372643 | -.338068 | -.302861 |
| 142 | -.388616 | -.352669 | -.316041 | -.278825 | -.241111 | -.202994 |
| 144 | -.294444 | -.255161 | -.215432 | -.175359 | -.135041 | -.094581 |
| 146 | -.190140 | -.148040 | -.105764 | -.063422 | -.021121 | .021030 |
| 148 | -.076736 | -.032427 | .011752 | .055688 | .099267 | .142374 |
| 150 | .044627 | .090449 | .135805 | .180574 | .224642 | .267891 |
| 152 | .172727 | .219277 | .264994 | .309756 | .353445 | .395944 |
| 154 | .306278 | .352687 | .397868 | .441700 | .484064 | .524850 |
| 156 | .443969 | .489279 | .532943 | .574842 | .614863 | .652899 |
| 158 | .584495 | .627661 | .668742 | .707624 | .744203 | .778380 |
| 160 | .726602 | .766483 | .803823 | .838518 | .870476 | .899610 |
| 162 | .869146 | .904495 | .936833 | .966071 | .992133 | 1.014952 |
| 164 | 1.011173 | 1.040611 | 1.066559 | 1.088948 | 1.107724 | 1.122841 |
| 166 | 1.152036 | 1.174013 | 1.192014 | 1.205997 | 1.215935 | 1.221812 |
| 168 | 1.291593 | 1.304309 | 1.312561 | 1.316338 | 1.315649 | 1.310514 |
| 170 | 1.430565 | 1.431832 | 1.428140 | 1.419524 | 1.406033 | 1.387734 |
| 172 | 1.571286 | 1.558238 | 1.539731 | 1.515851 | 1.486704 | 1.452415 |
| 174 | 1.719526 | 1.687989 | 1.650465 | 1.607116 | 1.558116 | 1.503668 |
| 176 | 1.890156 | 1.832896 | 1.769060 | 1.698905 | 1.622714 | 1.540789 |
| 178 | 2.133912 | 2.033681 | 1.926058 | 1.811475 | 1.690385 | 1.563269 |
| 180 | | | | | | 1.570796 |

# TABLE III

Table of $P_{-\frac{1}{2}+ib}$ (cos $\theta$):  Five Significant Figures

$\theta$:  0° (5°) 175°

b:  0 (0.1) 5.0

$$P_{-\frac{1}{2}+ib}(\cos \theta)$$

| b | $\theta$ 0 | 5 | 10 | 15 |
|---|---|---|---|---|
| .0 | 1.0000E-00 | 1.0004E-00 | 1.0019E-00 | 1.0043E-00 |
| .1 | 1.0000E-00 | 1.0004E-00 | 1.0019E-00 | 1.0044E-00 |
| .2 | 1.0000E-00 | 1.0005E-00 | 1.0022E-00 | 1.0049E-00 |
| .3 | 1.0000E-00 | 1.0006E-00 | 1.0025E-00 | 1.0058E-00 |
| .4 | 1.0000E-00 | 1.0007E-00 | 1.0031E-00 | 1.0070E-00 |
| .5 | 1.0000E-00 | 1.0009E-00 | 1.0038E-00 | 1.0086E-00 |
| .6 | 1.0000E-00 | 1.0011E-00 | 1.0046E-00 | 1.0105E-00 |
| .7 | 1.0000E-00 | 1.0014E-00 | 1.0056E-00 | 1.0127E-00 |
| .8 | 1.0000E-00 | 1.0016E-00 | 1.0067E-00 | 1.0153E-00 |
| .9 | 1.0000E-00 | 1.0020E-00 | 1.0080E-00 | 1.0182E-00 |
| 1.0 | 1.0000E-00 | 1.0023E-00 | 1.0095E-00 | 1.0215E-00 |
| 1.1 | 1.0000E-00 | 1.0027E-00 | 1.0111E-00 | 1.0252E-00 |
| 1.2 | 1.0000E-00 | 1.0032E-00 | 1.0129E-00 | 1.0292E-00 |
| 1.3 | 1.0000E-00 | 1.0036E-00 | 1.0148E-00 | 1.0336E-00 |
| 1.4 | 1.0000E-00 | 1.0042E-00 | 1.0169E-00 | 1.0383E-00 |
| 1.5 | 1.0000E-00 | 1.0047E-00 | 1.0191E-00 | 1.0434E-00 |
| 1.6 | 1.0000E-00 | 1.0053E-00 | 1.0215E-00 | 1.0488E-00 |
| 1.7 | 1.0000E-00 | 1.0059E-00 | 1.0240E-00 | 1.0546E-00 |
| 1.8 | 1.0000E-00 | 1.0066E-00 | 1.0267E-00 | 1.0608E-00 |
| 1.9 | 1.0000E-00 | 1.0073E-00 | 1.0296E-00 | 1.0674E-00 |
| 2.0 | 1.0000E-00 | 1.0081E-00 | 1.0326E-00 | 1.0743E-00 |
| 2.1 | 1.0000E-00 | 1.0088E-00 | 1.0358E-00 | 1.0816E-00 |
| 2.2 | 1.0000E-00 | 1.0097E-00 | 1.0391E-00 | 1.0893E-00 |
| 2.3 | 1.0000E-00 | 1.0105E-00 | 1.0426E-00 | 1.0974E-00 |
| 2.4 | 1.0000E-00 | 1.0114E-00 | 1.0463E-00 | 1.1059E-00 |
| 2.5 | 1.0000E-00 | 1.0124E-00 | 1.0501E-00 | 1.1148E-00 |
| 2.6 | 1.0000E-00 | 1.0133E-00 | 1.0541E-00 | 1.1241E-00 |
| 2.7 | 1.0000E-00 | 1.0144E-00 | 1.0583E-00 | 1.1338E-00 |
| 2.8 | 1.0000E-00 | 1.0154E-00 | 1.0626E-00 | 1.1439E-00 |
| 2.9 | 1.0000E-00 | 1.0165E-00 | 1.0671E-00 | 1.1544E-00 |
| 3.0 | 1.0000E-00 | 1.0176E-00 | 1.0717E-00 | 1.1653E-00 |
| 3.1 | 1.0000E-00 | 1.0188E-00 | 1.0766E-00 | 1.1767E-00 |
| 3.2 | 1.0000E-00 | 1.0200E-00 | 1.0815E-00 | 1.1885E-00 |
| 3.3 | 1.0000E-00 | 1.0213E-00 | 1.0867E-00 | 1.2007E-00 |
| 3.4 | 1.0000E-00 | 1.0226E-00 | 1.0920E-00 | 1.2134E-00 |
| 3.5 | 1.0000E-00 | 1.0239E-00 | 1.0976E-00 | 1.2265E-00 |
| 3.6 | 1.0000E-00 | 1.0253E-00 | 1.1032E-00 | 1.2401E-00 |
| 3.7 | 1.0000E-00 | 1.0267E-00 | 1.1091E-00 | 1.2542E-00 |
| 3.8 | 1.0000E-00 | 1.0281E-00 | 1.1151E-00 | 1.2687E-00 |
| 3.9 | 1.0000E-00 | 1.0296E-00 | 1.1214E-00 | 1.2838E-00 |
| 4.0 | 1.0000E-00 | 1.0311E-00 | 1.1277E-00 | 1.2993E-00 |
| 4.1 | 1.0000E-00 | 1.0327E-00 | 1.1343E-00 | 1.3153E-00 |
| 4.2 | 1.0000E-00 | 1.0343E-00 | 1.1411E-00 | 1.3318E-00 |
| 4.3 | 1.0000E-00 | 1.0360E-00 | 1.1480E-00 | 1.3488E-00 |
| 4.4 | 1.0000E-00 | 1.0376E-00 | 1.1552E-00 | 1.3663E-00 |
| 4.5 | 1.0000E-00 | 1.0394E-00 | 1.1625E-00 | 1.3844E-00 |
| 4.6 | 1.0000E-00 | 1.0411E-00 | 1.1700E-00 | 1.4030E-00 |
| 4.7 | 1.0000E-00 | 1.0430E-00 | 1.1777E-00 | 1.4222E-00 |
| 4.8 | 1.0000E-00 | 1.0448E-00 | 1.1856E-00 | 1.4419E-00 |
| 4.9 | 1.0000E-00 | 1.0467E-00 | 1.1937E-00 | 1.4623E-00 |
| 5.0 | 1.0000E-00 | 1.0486E-00 | 1.2019E-00 | 1.4831E-00 |

$$P_{-\frac{1}{2}+ib}(\cos\theta)$$

| b \ θ | 15 | 20 | 25 | 30 |
|---|---|---|---|---|
| .0 | 1.0043E-00 | 1.0076E-00 | 1.0120E-00 | 1.0174E-00 |
| .1 | 1.0044E-00 | 1.0079E-00 | 1.0125E-00 | 1.0181E-00 |
| .2 | 1.0049E-00 | 1.0088E-00 | 1.0139E-00 | 1.0202E-00 |
| .3 | 1.0058E-00 | 1.0104E-00 | 1.0163E-00 | 1.0237E-00 |
| .4 | 1.0070E-00 | 1.0125E-00 | 1.0197E-00 | 1.0286E-00 |
| .5 | 1.0086E-00 | 1.0153E-00 | 1.0241E-00 | 1.0349E-00 |
| .6 | 1.0105E-00 | 1.0187E-00 | 1.0294E-00 | 1.0427E-00 |
| .7 | 1.0127E-00 | 1.0227E-00 | 1.0358E-00 | 1.0519E-00 |
| .8 | 1.0153E-00 | 1.0274E-00 | 1.0431E-00 | 1.0626E-00 |
| .9 | 1.0182E-00 | 1.0327E-00 | 1.0515E-00 | 1.0748E-00 |
| 1.0 | 1.0215E-00 | 1.0386E-00 | 1.0608E-00 | 1.0885E-00 |
| 1.1 | 1.0252E-00 | 1.0452E-00 | 1.0712E-00 | 1.1038E-00 |
| 1.2 | 1.0292E-00 | 1.0524E-00 | 1.0827E-00 | 1.1206E-00 |
| 1.3 | 1.0336E-00 | 1.0602E-00 | 1.0952E-00 | 1.1390E-00 |
| 1.4 | 1.0383E-00 | 1.0688E-00 | 1.1088E-00 | 1.1591E-00 |
| 1.5 | 1.0434E-00 | 1.0780E-00 | 1.1235E-00 | 1.1809E-00 |
| 1.6 | 1.0488E-00 | 1.0878E-00 | 1.1394E-00 | 1.2044E-00 |
| 1.7 | 1.0546E-00 | 1.0984E-00 | 1.1563E-00 | 1.2297E-00 |
| 1.8 | 1.0608E-00 | 1.1097E-00 | 1.1745E-00 | 1.2569E-00 |
| 1.9 | 1.0674E-00 | 1.1217E-00 | 1.1939E-00 | 1.2859E-00 |
| 2.0 | 1.0743E-00 | 1.1344E-00 | 1.2144E-00 | 1.3169E-00 |
| 2.1 | 1.0816E-00 | 1.1478E-00 | 1.2363E-00 | 1.3499E-00 |
| 2.2 | 1.0893E-00 | 1.1620E-00 | 1.2594E-00 | 1.3850E-00 |
| 2.3 | 1.0974E-00 | 1.1769E-00 | 1.2838E-00 | 1.4223E-00 |
| 2.4 | 1.1059E-00 | 1.1926E-00 | 1.3096E-00 | 1.4618E-00 |
| 2.5 | 1.1148E-00 | 1.2091E-00 | 1.3368E-00 | 1.5036E-00 |
| 2.6 | 1.1241E-00 | 1.2263E-00 | 1.3655E-00 | 1.5478E-00 |
| 2.7 | 1.1338E-00 | 1.2444E-00 | 1.3956E-00 | 1.5946E-00 |
| 2.8 | 1.1439E-00 | 1.2634E-00 | 1.4272E-00 | 1.6439E-00 |
| 2.9 | 1.1544E-00 | 1.2831E-00 | 1.4604E-00 | 1.6960E-00 |
| 3.0 | 1.1653E-00 | 1.3038E-00 | 1.4952E-00 | 1.7509E-00 |
| 3.1 | 1.1767E-00 | 1.3253E-00 | 1.5317E-00 | 1.8087E-00 |
| 3.2 | 1.1885E-00 | 1.3478E-00 | 1.5698E-00 | 1.8695E-00 |
| 3.3 | 1.2007E-00 | 1.3711E-00 | 1.6098E-00 | 1.9336E-00 |
| 3.4 | 1.2134E-00 | 1.3955E-00 | 1.6516E-00 | 2.0009E-00 |
| 3.5 | 1.2265E-00 | 1.4207E-00 | 1.6953E-00 | 2.0718E-00 |
| 3.6 | 1.2401E-00 | 1.4470E-00 | 1.7409E-00 | 2.1462E-00 |
| 3.7 | 1.2542E-00 | 1.4743E-00 | 1.7886E-00 | 2.2244E-00 |
| 3.8 | 1.2687E-00 | 1.5027E-00 | 1.8383E-00 | 2.3066E-00 |
| 3.9 | 1.2838E-00 | 1.5321E-00 | 1.8903E-00 | 2.3929E-00 |
| 4.0 | 1.2993E-00 | 1.5627E-00 | 1.9444E-00 | 2.4835E-00 |
| 4.1 | 1.3153E-00 | 1.5943E-00 | 2.0009E-00 | 2.5786E-00 |
| 4.2 | 1.3318E-00 | 1.6271E-00 | 2.0598E-00 | 2.6784E-00 |
| 4.3 | 1.3488E-00 | 1.6611E-00 | 2.1212E-00 | 2.7831E-00 |
| 4.4 | 1.3663E-00 | 1.6964E-00 | 2.1852E-00 | 2.8930E-00 |
| 4.5 | 1.3844E-00 | 1.7329E-00 | 2.2519E-00 | 3.0082E-00 |
| 4.6 | 1.4030E-00 | 1.7706E-00 | 2.3213E-00 | 3.1291E-00 |
| 4.7 | 1.4222E-00 | 1.8097E-00 | 2.3936E-00 | 3.2559E-00 |
| 4.8 | 1.4419E-00 | 1.8502E-00 | 2.4689E-00 | 3.3889E-00 |
| 4.9 | 1.4623E-00 | 1.8920E-00 | 2.5474E-00 | 3.5284E-00 |
| 5.0 | 1.4831E-00 | 1.9353E-00 | 2.6290E-00 | 3.6746E-00 |

$$P_{-\frac{1}{2}+ib}(\cos \theta)$$

| b | θ  30 | 35 | 40 | 45 |
|---|-------|-----|-----|-----|
| .0 | 1.0174E-00 | 1.0238E-00 | 1.0313E-00 | 1.0399E-00 |
| .1 | 1.0181E-00 | 1.0247E-00 | 1.0326E-00 | 1.0415E-00 |
| .2 | 1.0202E-00 | 1.0276E-00 | 1.0363E-00 | 1.0464E-00 |
| .3 | 1.0237E-00 | 1.0324E-00 | 1.0427E-00 | 1.0545E-00 |
| .4 | 1.0286E-00 | 1.0392E-00 | 1.0516E-00 | 1.0659E-00 |
| .5 | 1.0349E-00 | 1.0479E-00 | 1.0631E-00 | 1.0807E-00 |
| .6 | 1.0427E-00 | 1.0586E-00 | 1.0773E-00 | 1.0989E-00 |
| .7 | 1.0519E-00 | 1.0713E-00 | 1.0941E-00 | 1.1205E-00 |
| .8 | 1.0626E-00 | 1.0861E-00 | 1.1137E-00 | 1.1458E-00 |
| .9 | 1.0748E-00 | 1.1029E-00 | 1.1362E-00 | 1.1748E-00 |
| 1.0 | 1.0885E-00 | 1.1219E-00 | 1.1615E-00 | 1.2077E-00 |
| 1.1 | 1.1038E-00 | 1.1431E-00 | 1.1899E-00 | 1.2446E-00 |
| 1.2 | 1.1206E-00 | 1.1666E-00 | 1.2213E-00 | 1.2857E-00 |
| 1.3 | 1.1390E-00 | 1.1923E-00 | 1.2560E-00 | 1.3311E-00 |
| 1.4 | 1.1591E-00 | 1.2205E-00 | 1.2941E-00 | 1.3811E-00 |
| 1.5 | 1.1809E-00 | 1.2511E-00 | 1.3356E-00 | 1.4360E-00 |
| 1.6 | 1.2044E-00 | 1.2843E-00 | 1.3808E-00 | 1.4959E-00 |
| 1.7 | 1.2297E-00 | 1.3202E-00 | 1.4298E-00 | 1.5613E-00 |
| 1.8 | 1.2569E-00 | 1.3588E-00 | 1.4829E-00 | 1.6322E-00 |
| 1.9 | 1.2859E-00 | 1.4003E-00 | 1.5401E-00 | 1.7093E-00 |
| 2.0 | 1.3169E-00 | 1.4447E-00 | 1.6017E-00 | 1.7926E-00 |
| 2.1 | 1.3499E-00 | 1.4923E-00 | 1.6680E-00 | 1.8828E-00 |
| 2.2 | 1.3850E-00 | 1.5431E-00 | 1.7391E-00 | 1.9802E-00 |
| 2.3 | 1.4223E-00 | 1.5973E-00 | 1.8155E-00 | 2.0852E-00 |
| 2.4 | 1.4618E-00 | 1.6550E-00 | 1.8972E-00 | 2.1984E-00 |
| 2.5 | 1.5036E-00 | 1.7165E-00 | 1.9848E-00 | 2.3204E-00 |
| 2.6 | 1.5478E-00 | 1.7818E-00 | 2.0784E-00 | 2.4517E-00 |
| 2.7 | 1.5946E-00 | 1.8512E-00 | 2.1784E-00 | 2.5929E-00 |
| 2.8 | 1.6439E-00 | 1.9249E-00 | 2.2853E-00 | 2.7447E-00 |
| 2.9 | 1.6960E-00 | 2.0031E-00 | 2.3994E-00 | 2.9080E-00 |
| 3.0 | 1.7509E-00 | 2.0861E-00 | 2.5212E-00 | 3.0834E-00 |
| 3.1 | 1.8087E-00 | 2.1739E-00 | 2.6512E-00 | 3.2718E-00 |
| 3.2 | 1.8695E-00 | 2.2670E-00 | 2.7897E-00 | 3.4742E-00 |
| 3.3 | 1.9336E-00 | 2.3656E-00 | 2.9374E-00 | 3.6916E-00 |
| 3.4 | 2.0009E-00 | 2.4700E-00 | 3.0949E-00 | 3.9250E-00 |
| 3.5 | 2.0718E-00 | 2.5804E-00 | 3.2627E-00 | 4.1755E-00 |
| 3.6 | 2.1462E-00 | 2.6972E-00 | 3.4415E-00 | 4.4445E-00 |
| 3.7 | 2.2244E-00 | 2.8208E-00 | 3.6320E-00 | 4.7333E-00 |
| 3.8 | 2.3066E-00 | 2.9516E-00 | 3.8350E-00 | 5.0432E-00 |
| 3.9 | 2.3929E-00 | 3.0898E-00 | 4.0512E-00 | 5.3760E-00 |
| 4.0 | 2.4835E-00 | 3.2359E-00 | 4.2814E-00 | 5.7331E-00 |
| 4.1 | 2.5786E-00 | 3.3904E-00 | 4.5267E-00 | 6.1165E-00 |
| 4.2 | 2.6784E-00 | 3.5537E-00 | 4.7878E-00 | 6.5280E-00 |
| 4.3 | 2.7831E-00 | 3.7262E-00 | 5.0660E-00 | 6.9697E-00 |
| 4.4 | 2.8930E-00 | 3.9086E-00 | 5.3622E-00 | 7.4439E-00 |
| 4.5 | 3.0082E-00 | 4.1014E-00 | 5.6777E-00 | 7.9530E-00 |
| 4.6 | 3.1291E-00 | 4.3050E-00 | 6.0137E-00 | 8.4995E-00 |
| 4.7 | 3.2559E-00 | 4.5202E-00 | 6.3715E-00 | 9.0863E-00 |
| 4.8 | 3.3889E-00 | 4.7476E-00 | 6.7526E-00 | 9.7164E-00 |
| 4.9 | 3.5284E-00 | 4.9879E-00 | 7.1585E-00 | 1.0392E+01 |
| 5.0 | 3.6746E-00 | 5.2418E-00 | 7.5908E-00 | 1.1119E+01 |

| $\theta$ $b$ | 45 | 50 | 55 | 60 |
|---|---|---|---|---|
| .0 | 1.0399E-00 | 1.0497E-00 | 1.0608E-00 | 1.0731E-00 |
| .1 | 1.0415E-00 | 1.0517E-00 | 1.0632E-00 | 1.0761E-00 |
| .2 | 1.0464E-00 | 1.0578E-00 | 1.0707E-00 | 1.0851E-00 |
| .3 | 1.0545E-00 | 1.0679E-00 | 1.0831E-00 | 1.1001E-00 |
| .4 | 1.0659E-00 | 1.0822E-00 | 1.1006E-00 | 1.1213E-00 |
| .5 | 1.0807E-00 | 1.1007E-00 | 1.1234E-00 | 1.1489E-00 |
| .6 | 1.0989E-00 | 1.1235E-00 | 1.1515E-00 | 1.1830E-00 |
| .7 | 1.1205E-00 | 1.1508E-00 | 1.1852E-00 | 1.2241E-00 |
| .8 | 1.1458E-00 | 1.1827E-00 | 1.2247E-00 | 1.2723E-00 |
| .9 | 1.1748E-00 | 1.2194E-00 | 1.2703E-00 | 1.3281E-00 |
| 1.0 | 1.2077E-00 | 1.2611E-00 | 1.3223E-00 | 1.3921E-00 |
| 1.1 | 1.2446E-00 | 1.3080E-00 | 1.3810E-00 | 1.4646E-00 |
| 1.2 | 1.2857E-00 | 1.3605E-00 | 1.4470E-00 | 1.5464E-00 |
| 1.3 | 1.3311E-00 | 1.4188E-00 | 1.5205E-00 | 1.6381E-00 |
| 1.4 | 1.3811E-00 | 1.4832E-00 | 1.6023E-00 | 1.7404E-00 |
| 1.5 | 1.4360E-00 | 1.5542E-00 | 1.6927E-00 | 1.8544E-00 |
| 1.6 | 1.4959E-00 | 1.6322E-00 | 1.7926E-00 | 1.9808E-00 |
| 1.7 | 1.5613E-00 | 1.7176E-00 | 1.9026E-00 | 2.1209E-00 |
| 1.8 | 1.6322E-00 | 1.8108E-00 | 2.0234E-00 | 2.2757E-00 |
| 1.9 | 1.7093E-00 | 1.9126E-00 | 2.1560E-00 | 2.4467E-00 |
| 2.0 | 1.7926E-00 | 2.0234E-00 | 2.3013E-00 | 2.6352E-00 |
| 2.1 | 1.8828E-00 | 2.1439E-00 | 2.4603E-00 | 2.8430E-00 |
| 2.2 | 1.9802E-00 | 2.2749E-00 | 2.6342E-00 | 3.0718E-00 |
| 2.3 | 2.0852E-00 | 2.4171E-00 | 2.8243E-00 | 3.3236E-00 |
| 2.4 | 2.1984E-00 | 2.5713E-00 | 3.0320E-00 | 3.6006E-00 |
| 2.5 | 2.3204E-00 | 2.7386E-00 | 3.2587E-00 | 3.9053E-00 |
| 2.6 | 2.4517E-00 | 2.9198E-00 | 3.5061E-00 | 4.2403E-00 |
| 2.7 | 2.5929E-00 | 3.1162E-00 | 3.7761E-00 | 4.6086E-00 |
| 2.8 | 2.7447E-00 | 3.3288E-00 | 4.0707E-00 | 5.0134E-00 |
| 2.9 | 2.9080E-00 | 3.5590E-00 | 4.3919E-00 | 5.4584E-00 |
| 3.0 | 3.0834E-00 | 3.8081E-00 | 4.7423E-00 | 5.9474E-00 |
| 3.1 | 3.2718E-00 | 4.0778E-00 | 5.1243E-00 | 6.4850E-00 |
| 3.2 | 3.4742E-00 | 4.3695E-00 | 5.5410E-00 | 7.0758E-00 |
| 3.3 | 3.6916E-00 | 4.6852E-00 | 5.9953E-00 | 7.7253E-00 |
| 3.4 | 3.9250E-00 | 5.0268E-00 | 6.4907E-00 | 8.4393E-00 |
| 3.5 | 4.1755E-00 | 5.3964E-00 | 7.0310E-00 | 9.2242E-00 |
| 3.6 | 4.4445E-00 | 5.7962E-00 | 7.6203E-00 | 1.0087E+01 |
| 3.7 | 4.7333E-00 | 6.2288E-00 | 8.2629E-00 | 1.1036E+01 |
| 3.8 | 5.0432E-00 | 6.6968E-00 | 8.9639E-00 | 1.2079E+01 |
| 3.9 | 5.3760E-00 | 7.2032E-00 | 9.7285E-00 | 1.3227E+01 |
| 4.0 | 5.7331E-00 | 7.7511E-00 | 1.0562E+01 | 1.4490E+01 |
| 4.1 | 6.1165E-00 | 8.3440E-00 | 1.1472E+01 | 1.5879E+01 |
| 4.2 | 6.5280E-00 | 8.9856E-00 | 1.2465E+01 | 1.7407E+01 |
| 4.3 | 6.9697E-00 | 9.6799E-00 | 1.3549E+01 | 1.9089E+01 |
| 4.4 | 7.4439E-00 | 1.0431E+01 | 1.4731E+01 | 2.0940E+01 |
| 4.5 | 7.9530E-00 | 1.1244E+01 | 1.6021E+01 | 2.2977E+01 |
| 4.6 | 8.4995E-00 | 1.2125E+01 | 1.7430E+01 | 2.5220E+01 |
| 4.7 | 9.0863E-00 | 1.3078E+01 | 1.8968E+01 | 2.7689E+01 |
| 4.8 | 9.7164E-00 | 1.4110E+01 | 2.0647E+01 | 3.0407E+01 |
| 4.9 | 1.0392E+01 | 1.5227E+01 | 2.2480E+01 | 3.3401E+01 |
| 5.0 | 1.1119E+01 | 1.6437E+01 | 2.4482E+01 | 3.6697E+01 |

$$P_{-\frac{1}{2}+ib}(\cos\theta)$$

| b | θ | 60 | 65 | 70 | 75 |
|---|---|---|---|---|---|
| .0 | | 1.0731E-00 | 1.0869E-00 | 1.1021E-00 | 1.1189E-00 |
| .1 | | 1.0761E-00 | 1.0904E-00 | 1.1063E-00 | 1.1238E-00 |
| .2 | | 1.0851E-00 | 1.1011E-00 | 1.1189E-00 | 1.1385E-00 |
| .3 | | 1.1001E-00 | 1.1190E-00 | 1.1401E-00 | 1.1633E-00 |
| .4 | | 1.1213E-00 | 1.1444E-00 | 1.1700E-00 | 1.1985E-00 |
| .5 | | 1.1489E-00 | 1.1774E-00 | 1.2091E-00 | 1.2445E-00 |
| .6 | | 1.1830E-00 | 1.2184E-00 | 1.2578E-00 | 1.3018E-00 |
| .7 | | 1.2241E-00 | 1.2677E-00 | 1.3167E-00 | 1.3714E-00 |
| .8 | | 1.2723E-00 | 1.3260E-00 | 1.3863E-00 | 1.4540E-00 |
| .9 | | 1.3281E-00 | 1.3936E-00 | 1.4675E-00 | 1.5508E-00 |
| 1.0 | | 1.3921E-00 | 1.4714E-00 | 1.5613E-00 | 1.6630E-00 |
| 1.1 | | 1.4646E-00 | 1.5600E-00 | 1.6687E-00 | 1.7922E-00 |
| 1.2 | | 1.5464E-00 | 1.6604E-00 | 1.7908E-00 | 1.9399E-00 |
| 1.3 | | 1.6381E-00 | 1.7735E-00 | 1.9293E-00 | 2.1083E-00 |
| 1.4 | | 1.7404E-00 | 1.9005E-00 | 2.0856E-00 | 2.2995E-00 |
| 1.5 | | 1.8544E-00 | 2.0426E-00 | 2.2615E-00 | 2.5161E-00 |
| 1.6 | | 1.9808E-00 | 2.2012E-00 | 2.4592E-00 | 2.7610E-00 |
| 1.7 | | 2.1209E-00 | 2.3780E-00 | 2.6809E-00 | 3.0375E-00 |
| 1.8 | | 2.2757E-00 | 2.5748E-00 | 2.9292E-00 | 3.3495E-00 |
| 1.9 | | 2.4467E-00 | 2.7934E-00 | 3.2071E-00 | 3.7010E-00 |
| 2.0 | | 2.6352E-00 | 3.0362E-00 | 3.5179E-00 | 4.0971E-00 |
| 2.1 | | 2.8430E-00 | 3.3057E-00 | 3.8653E-00 | 4.5430E-00 |
| 2.2 | | 3.0718E-00 | 3.6045E-00 | 4.2534E-00 | 5.0451E-00 |
| 2.3 | | 3.3236E-00 | 3.9357E-00 | 4.6869E-00 | 5.6102E-00 |
| 2.4 | | 3.6006E-00 | 4.3029E-00 | 5.1710E-00 | 6.2462E-00 |
| 2.5 | | 3.9053E-00 | 4.7097E-00 | 5.7116E-00 | 6.9621E-00 |
| 2.6 | | 4.2403E-00 | 5.1604E-00 | 6.3153E-00 | 7.7678E-00 |
| 2.7 | | 4.6086E-00 | 5.6598E-00 | 6.9894E-00 | 8.6749E-00 |
| 2.8 | | 5.0134E-00 | 6.2130E-00 | 7.7422E-00 | 9.6961E-00 |
| 2.9 | | 5.4584E-00 | 6.8259E-00 | 8.5829E-00 | 1.0845E+01 |
| 3.0 | | 5.9474E-00 | 7.5049E-00 | 9.5220E-00 | 1.2140E+01 |
| 3.1 | | 6.4850E-00 | 8.2572E-00 | 1.0570E+01 | 1.3599E+01 |
| 3.2 | | 7.0758E-00 | 9.0909E-00 | 1.1742E+01 | 1.5242E+01 |
| 3.3 | | 7.7253E-00 | 1.0014E+01 | 1.3052E+01 | 1.7094E+01 |
| 3.4 | | 8.4393E-00 | 1.1038E+01 | 1.4516E+01 | 1.9180E+01 |
| 3.5 | | 9.2242E-00 | 1.2173E+01 | 1.6152E+01 | 2.1533E+01 |
| 3.6 | | 1.0087E+01 | 1.3432E+01 | 1.7980E+01 | 2.4185E+01 |
| 3.7 | | 1.1036E+01 | 1.4827E+01 | 2.0025E+01 | 2.7175E+01 |
| 3.8 | | 1.2079E+01 | 1.6374E+01 | 2.2312E+01 | 3.0548E+01 |
| 3.9 | | 1.3227E+01 | 1.8090E+01 | 2.4870E+01 | 3.4352E+01 |
| 4.0 | | 1.4490E+01 | 1.9994E+01 | 2.7732E+01 | 3.8645E+01 |
| 4.1 | | 1.5879E+01 | 2.2106E+01 | 3.0933E+01 | 4.3489E+01 |
| 4.2 | | 1.7407E+01 | 2.4449E+01 | 3.4516E+01 | 4.8956E+01 |
| 4.3 | | 1.9089E+01 | 2.7050E+01 | 3.8527E+01 | 5.5128E+01 |
| 4.4 | | 2.0940E+01 | 2.9936E+01 | 4.3015E+01 | 6.2096E+01 |
| 4.5 | | 2.2977E+01 | 3.3140E+01 | 4.8041E+01 | 6.9965E+01 |
| 4.6 | | 2.5220E+01 | 3.6697E+01 | 5.3669E+01 | 7.8851E+01 |
| 4.7 | | 2.7689E+01 | 4.0647E+01 | 5.9971E+01 | 8.8890E+01 |
| 4.8 | | 3.0407E+01 | 4.5033E+01 | 6.7030E+01 | 1.0023E+02 |
| 4.9 | | 3.3401E+01 | 4.9904E+01 | 7.4937E+01 | 1.1304E+02 |
| 5.0 | | 3.6697E+01 | 5.5316E+01 | 8.3797E+01 | 1.2752E+02 |

$$P_{-\frac{1}{2}+ib}(\cos\theta)$$

| $\theta$ | 75 | 80 | 85 | 90 |
|---|---|---|---|---|
| **b** | | | | |
| .0 | 1.1189E-00 | 1.1374E-00 | 1.1578E-00 | 1.1803E-00 |
| .1 | 1.1238E-00 | 1.1431E-00 | 1.1644E-00 | 1.1878E-00 |
| .2 | 1.1385E-00 | 1.1602E-00 | 1.1841E-00 | 1.2105E-00 |
| .3 | 1.1633E-00 | 1.1891E-00 | 1.2174E-00 | 1.2487E-00 |
| .4 | 1.1985E-00 | 1.2300E-00 | 1.2648E-00 | 1.3033E-00 |
| .5 | 1.2445E-00 | 1.2836E-00 | 1.3271E-00 | 1.3752E-00 |
| .6 | 1.3018E-00 | 1.3508E-00 | 1.4053E-00 | 1.4658E-00 |
| .7 | 1.3714E-00 | 1.4325E-00 | 1.5007E-00 | 1.5768E-00 |
| .8 | 1.4540E-00 | 1.5299E-00 | 1.6150E-00 | 1.7103E-00 |
| .9 | 1.5508E-00 | 1.6446E-00 | 1.7501E-00 | 1.8689E-00 |
| 1.0 | 1.6630E-00 | 1.7781E-00 | 1.9083E-00 | 2.0556E-00 |
| 1.1 | 1.7922E-00 | 1.9326E-00 | 2.0922E-00 | 2.2739E-00 |
| 1.2 | 1.9399E-00 | 2.1103E-00 | 2.3051E-00 | 2.5281E-00 |
| 1.3 | 2.1083E-00 | 2.3140E-00 | 2.5506E-00 | 2.8231E-00 |
| 1.4 | 2.2995E-00 | 2.5468E-00 | 2.8330E-00 | 3.1646E-00 |
| 1.5 | 2.5161E-00 | 2.8122E-00 | 3.1571E-00 | 3.5595E-00 |
| 1.6 | 2.7610E-00 | 3.1144E-00 | 3.5287E-00 | 4.0154E-00 |
| 1.7 | 3.0375E-00 | 3.4580E-00 | 3.9543E-00 | 4.5413E-00 |
| 1.8 | 3.3495E-00 | 3.8483E-00 | 4.4413E-00 | 5.1478E-00 |
| 1.9 | 3.7010E-00 | 4.2914E-00 | 4.9985E-00 | 5.8470E-00 |
| 2.0 | 4.0971E-00 | 4.7944E-00 | 5.6357E-00 | 6.6529E-00 |
| 2.1 | 4.5430E-00 | 5.3651E-00 | 6.3643E-00 | 7.5819E-00 |
| 2.2 | 5.0451E-00 | 6.0126E-00 | 7.1976E-00 | 8.6528E-00 |
| 2.3 | 5.6102E-00 | 6.7471E-00 | 8.1505E-00 | 9.8874E-00 |
| 2.4 | 6.2462E-00 | 7.5805E-00 | 9.2404E-00 | 1.1311E+01 |
| 2.5 | 6.9621E-00 | 8.5260E-00 | 1.0487E+01 | 1.2953E+01 |
| 2.6 | 7.7678E-00 | 9.5990E-00 | 1.1913E+01 | 1.4847E+01 |
| 2.7 | 8.6749E-00 | 1.0816E+01 | 1.3545E+01 | 1.7033E+01 |
| 2.8 | 9.6961E-00 | 1.2199E+01 | 1.5414E+01 | 1.9557E+01 |
| 2.9 | 1.0845E+01 | 1.3768E+01 | 1.7553E+01 | 2.2470E+01 |
| 3.0 | 1.2140E+01 | 1.5550E+01 | 2.0003E+01 | 2.5835E+01 |
| 3.1 | 1.3599E+01 | 1.7574E+01 | 2.2809E+01 | 2.9722E+01 |
| 3.2 | 1.5242E+01 | 1.9874E+01 | 2.6023E+01 | 3.4213E+01 |
| 3.3 | 1.7094E+01 | 2.2487E+01 | 2.9708E+01 | 3.9405E+01 |
| 3.4 | 1.9180E+01 | 2.5458E+01 | 3.3931E+01 | 4.5406E+01 |
| 3.5 | 2.1533E+01 | 2.8834E+01 | 3.8773E+01 | 5.2347E+01 |
| 3.6 | 2.4185E+01 | 3.2673E+01 | 4.4326E+01 | 6.0374E+01 |
| 3.7 | 2.7175E+01 | 3.7039E+01 | 5.0695E+01 | 6.9662E+01 |
| 3.8 | 3.0548E+01 | 4.2006E+01 | 5.8002E+01 | 8.0410E+01 |
| 3.9 | 3.4352E+01 | 4.7657E+01 | 6.6388E+01 | 9.2850E+01 |
| 4.0 | 3.8645E+01 | 5.4087E+01 | 7.6013E+01 | 1.0725E+02 |
| 4.1 | 4.3489E+01 | 6.1406E+01 | 8.7063E+01 | 1.2392E+02 |
| 4.2 | 4.8956E+01 | 6.9738E+01 | 9.9750E+01 | 1.4324E+02 |
| 4.3 | 5.5128E+01 | 7.9224E+01 | 1.1432E+02 | 1.6561E+02 |
| 4.4 | 6.2096E+01 | 9.0027E+01 | 1.3105E+02 | 1.9154E+02 |
| 4.5 | 6.9965E+01 | 1.0233E+02 | 1.5028E+02 | 2.2158E+02 |
| 4.6 | 7.8851E+01 | 1.1634E+02 | 1.7238E+02 | 2.5640E+02 |
| 4.7 | 8.8890E+01 | 1.3231E+02 | 1.9777E+02 | 2.9676E+02 |
| 4.8 | 1.0023E+02 | 1.5051E+02 | 2.2695E+02 | 3.4356E+02 |
| 4.9 | 1.1304E+02 | 1.7125E+02 | 2.6050E+02 | 3.9782E+02 |
| 5.0 | 1.2752E+02 | 1.9490E+02 | 2.9908E+02 | 4.6076E+02 |

$$P_{-\frac{1}{2}+ib}(\cos\theta)$$

| b | $\theta$  90 | 95 | 100 | 105 |
|------|------------|------------|------------|------------|
| .0 | 1.1803E-00 | 1.2050E-00 | 1.2322E-00 | 1.2622E-00 |
| .1 | 1.1878E-00 | 1.2136E-00 | 1.2419E-00 | 1.2732E-00 |
| .2 | 1.2105E-00 | 1.2395E-00 | 1.2715E-00 | 1.3068E-00 |
| .3 | 1.2487E-00 | 1.2833E-00 | 1.3215E-00 | 1.3637E-00 |
| .4 | 1.3033E-00 | 1.3459E-00 | 1.3930E-00 | 1.4453E-00 |
| .5 | 1.3752E-00 | 1.4286E-00 | 1.4879E-00 | 1.5538E-00 |
| .6 | 1.4658E-00 | 1.5332E-00 | 1.6083E-00 | 1.6920E-00 |
| .7 | 1.5768E-00 | 1.6619E-00 | 1.7570E-00 | 1.8635E-00 |
| .8 | 1.7103E-00 | 1.8173E-00 | 1.9375E-00 | 2.0728E-00 |
| .9 | 1.8689E-00 | 2.0028E-00 | 2.1541E-00 | 2.3252E-00 |
| 1.0 | 2.0556E-00 | 2.2224E-00 | 2.4119E-00 | 2.6275E-00 |
| 1.1 | 2.2739E-00 | 2.4808E-00 | 2.7172E-00 | 2.9877E-00 |
| 1.2 | 2.5281E-00 | 2.7836E-00 | 3.0772E-00 | 3.4153E-00 |
| 1.3 | 2.8231E-00 | 3.1373E-00 | 3.5006E-00 | 3.9218E-00 |
| 1.4 | 3.1646E-00 | 3.5497E-00 | 3.9978E-00 | 4.5209E-00 |
| 1.5 | 3.5595E-00 | 4.0298E-00 | 4.5809E-00 | 5.2288E-00 |
| 1.6 | 4.0154E-00 | 4.5882E-00 | 5.2643E-00 | 6.0648E-00 |
| 1.7 | 4.5413E-00 | 5.2373E-00 | 6.0648E-00 | 7.0518E-00 |
| 1.8 | 5.1478E-00 | 5.9916E-00 | 7.0024E-00 | 8.2170E-00 |
| 1.9 | 5.8470E-00 | 6.8681E-00 | 8.1004E-00 | 9.5928E-00 |
| 2.0 | 6.6529E-00 | 7.8864E-00 | 9.3866E-00 | 1.1217E+01 |
| 2.1 | 7.5819E-00 | 9.0697E-00 | 1.0893E+01 | 1.3136E+01 |
| 2.2 | 8.6528E-00 | 1.0444E+01 | 1.2659E+01 | 1.5404E+01 |
| 2.3 | 9.8874E-00 | 1.2043E+01 | 1.4728E+01 | 1.8084E+01 |
| 2.4 | 1.1311E+01 | 1.3902E+01 | 1.7155E+01 | 2.1254E+01 |
| 2.5 | 1.2953E+01 | 1.6063E+01 | 2.0001E+01 | 2.5002E+01 |
| 2.6 | 1.4847E+01 | 1.8578E+01 | 2.3340E+01 | 2.9438E+01 |
| 2.7 | 1.7033E+01 | 2.1505E+01 | 2.7259E+01 | 3.4688E+01 |
| 2.8 | 1.9557E+01 | 2.4912E+01 | 3.1859E+01 | 4.0905E+01 |
| 2.9 | 2.2470E+01 | 2.8879E+01 | 3.7263E+01 | 4.8270E+01 |
| 3.0 | 2.5835E+01 | 3.3500E+01 | 4.3610E+01 | 5.6995E+01 |
| 3.1 | 2.9722E+01 | 3.8884E+01 | 5.1069E+01 | 6.7338E+01 |
| 3.2 | 3.4213E+01 | 4.5158E+01 | 5.9837E+01 | 7.9600E+01 |
| 3.3 | 3.9405E+01 | 5.2472E+01 | 7.0147E+01 | 9.4143E+01 |
| 3.4 | 4.5406E+01 | 6.1002E+01 | 8.2272E+01 | 1.1139E+02 |
| 3.5 | 5.2347E+01 | 7.0950E+01 | 9.6538E+01 | 1.3187E+02 |
| 3.6 | 6.0374E+01 | 8.2556E+01 | 1.1332E+02 | 1.5617E+02 |
| 3.7 | 6.9662E+01 | 9.6100E+01 | 1.3308E+02 | 1.8502E+02 |
| 3.8 | 8.0410E+01 | 1.1190E+02 | 1.5635E+02 | 2.1929E+02 |
| 3.9 | 9.2850E+01 | 1.3036E+02 | 1.8374E+02 | 2.6000E+02 |
| 4.0 | 1.0725E+02 | 1.5191E+02 | 2.1601E+02 | 3.0837E+02 |
| 4.1 | 1.2392E+02 | 1.7709E+02 | 2.5404E+02 | 3.6585E+02 |
| 4.2 | 1.4324E+02 | 2.0650E+02 | 2.9884E+02 | 4.3417E+02 |
| 4.3 | 1.6561E+02 | 2.4086E+02 | 3.5165E+02 | 5.1540E+02 |
| 4.4 | 1.9154E+02 | 2.8102E+02 | 4.1390E+02 | 6.1200E+02 |
| 4.5 | 2.2158E+02 | 3.2797E+02 | 4.8731E+02 | 7.2690E+02 |
| 4.6 | 2.5640E+02 | 3.8285E+02 | 5.7387E+02 | 8.6357E+02 |
| 4.7 | 2.9676E+02 | 4.4703E+02 | 6.7598E+02 | 1.0261E+03 |
| 4.8 | 3.4356E+02 | 5.2208E+02 | 7.9644E+02 | 1.2197E+03 |
| 4.9 | 3.9782E+02 | 6.0988E+02 | 9.3857E+02 | 1.4500E+03 |
| 5.0 | 4.6076E+02 | 7.1259E+02 | 1.1063E+03 | 1.7242E+03 |

$$P_{-\frac{1}{2}+ib}(\cos \theta)$$

| $\theta$ \ b | 105 | 110 | 115 | 120 |
|---|---|---|---|---|
| .0 | 1.2622E-00 | 1.2953E-00 | 1.3320E-00 | 1.3728E-00 |
| .1 | 1.2732E-00 | 1.3078E-00 | 1.3462E-00 | 1.3889E-00 |
| .2 | 1.3068E-00 | 1.3459E-00 | 1.3892E-00 | 1.4376E-00 |
| .3 | 1.3637E-00 | 1.4104E-00 | 1.4625E-00 | 1.5205E-00 |
| .4 | 1.4453E-00 | 1.5034E-00 | 1.5681E-00 | 1.6405E-00 |
| .5 | 1.5538E-00 | 1.6273E-00 | 1.7095E-00 | 1.8017E-00 |
| .6 | 1.6920E-00 | 1.7858E-00 | 1.8910E-00 | 2.0095E-00 |
| .7 | 1.8635E-00 | 1.9833E-00 | 2.1183E-00 | 2.2711E-00 |
| .8 | 2.0728E-00 | 2.2255E-00 | 2.3985E-00 | 2.5954E-00 |
| .9 | 2.3252E-00 | 2.5194E-00 | 2.7406E-00 | 2.9937E-00 |
| 1.0 | 2.6275E-00 | 2.8736E-00 | 3.1554E-00 | 3.4798E-00 |
| 1.1 | 2.9877E-00 | 3.2983E-00 | 3.6563E-00 | 4.0708E-00 |
| 1.2 | 3.4153E-00 | 3.8060E-00 | 4.2593E-00 | 4.7875E-00 |
| 1.3 | 3.9218E-00 | 4.4118E-00 | 4.9840E-00 | 5.6554E-00 |
| 1.4 | 4.5209E-00 | 5.1336E-00 | 5.8541E-00 | 6.7055E-00 |
| 1.5 | 5.2288E-00 | 5.9930E-00 | 6.8983E-00 | 7.9757E-00 |
| 1.6 | 6.0648E-00 | 7.0159E-00 | 8.1509E-00 | 9.5118E-00 |
| 1.7 | 7.0518E-00 | 8.2333E-00 | 9.6538E-00 | 1.1369E+01 |
| 1.8 | 8.2170E-00 | 9.6822E-00 | 1.1457E+01 | 1.3618E+01 |
| 1.9 | 9.5928E-00 | 1.1406E+01 | 1.3621E+01 | 1.6339E+01 |
| 2.0 | 1.1217E+01 | 1.3460E+01 | 1.6220E+01 | 1.9634E+01 |
| 2.1 | 1.3136E+01 | 1.5906E+01 | 1.9342E+01 | 2.3625E+01 |
| 2.2 | 1.5404E+01 | 1.8821E+01 | 2.3094E+01 | 2.8462E+01 |
| 2.3 | 1.8084E+01 | 2.2296E+01 | 2.7604E+01 | 3.4328E+01 |
| 2.4 | 2.1254E+01 | 2.6439E+01 | 3.3028E+01 | 4.1443E+01 |
| 2.5 | 2.5002E+01 | 3.1381E+01 | 3.9554E+01 | 5.0077E+01 |
| 2.6 | 2.9438E+01 | 3.7280E+01 | 4.7410E+01 | 6.0560E+01 |
| 2.7 | 3.4688E+01 | 4.4322E+01 | 5.6870E+01 | 7.3294E+01 |
| 2.8 | 4.0905E+01 | 5.2733E+01 | 6.8265E+01 | 8.8765E+01 |
| 2.9 | 4.8270E+01 | 6.2781E+01 | 8.1997E+01 | 1.0757E+02 |
| 3.0 | 5.6995E+01 | 7.4790E+01 | 9.8552E+01 | 1.3044E+02 |
| 3.1 | 6.7338E+01 | 8.9147E+01 | 1.1851E+02 | 1.5826E+02 |
| 3.2 | 7.9600E+01 | 1.0631E+02 | 1.4259E+02 | 1.9211E+02 |
| 3.3 | 9.4143E+01 | 1.2685E+02 | 1.7166E+02 | 2.3332E+02 |
| 3.4 | 1.1139E+02 | 1.5143E+02 | 2.0673E+02 | 2.8349E+02 |
| 3.5 | 1.3187E+02 | 1.8086E+02 | 2.4909E+02 | 3.4460E+02 |
| 3.6 | 1.5617E+02 | 2.1609E+02 | 3.0025E+02 | 4.1905E+02 |
| 3.7 | 1.8502E+02 | 2.5828E+02 | 3.6205E+02 | 5.0978E+02 |
| 3.8 | 2.1929E+02 | 3.0882E+02 | 4.3673E+02 | 6.2038E+02 |
| 3.9 | 2.6000E+02 | 3.6939E+02 | 5.2700E+02 | 7.5522E+02 |
| 4.0 | 3.0837E+02 | 4.4197E+02 | 6.3613E+02 | 9.1968E+02 |
| 4.1 | 3.6585E+02 | 5.2899E+02 | 7.6810E+02 | 1.1202E+03 |
| 4.2 | 4.3417E+02 | 6.3333E+02 | 9.2772E+02 | 1.3650E+03 |
| 4.3 | 5.1540E+02 | 7.5846E+02 | 1.1208E+03 | 2.0283E+03 |
| 4.4 | 6.1200E+02 | 9.0856E+02 | 1.3545E+03 | 2.4735E+03 |
| 4.5 | 7.2690E+02 | 1.0886E+03 | 1.6373E+03 | 3.0170E+03 |
| 4.6 | 8.6357E+02 | 1.3047E+03 | 1.9796E+03 | 3.6809E+03 |
| 4.7 | 1.0261E+03 | 1.5641E+03 | 2.3940E+03 | 4.4918E+03 |
| 4.8 | 1.2197E+03 | 1.8754E+03 | 2.8959E+03 | 5.4825E+03 |
| 4.9 | 1.4500E+03 | 2.2493E+03 | 3.5038E+03 |  |
| 5.0 | 1.7242E+03 | 2.6981E+03 | 4.2400E+03 | 6.6931E+03 |

$$P_{-\frac{1}{2}+i\nu}(\cos\theta)$$

| b | θ 120 | 125 | 130 | 135 |
|---|---|---|---|---|
| .0 | 1.3728E-00 | 1.4185E-00 | 1.4698E-00 | 1.5279E-00 |
| .1 | 1.3889E-00 | 1.4366E-00 | 1.4903E-00 | 1.5511E-00 |
| .2 | 1.4376E-00 | 1.4916E-00 | 1.5525E-00 | 1.6216E-00 |
| .3 | 1.5205E-00 | 1.5856E-00 | 1.6591E-00 | 1.7426E-00 |
| .4 | 1.6405E-00 | 1.7220E-00 | 1.8141E-00 | 1.9192E-00 |
| .5 | 1.8017E-00 | 1.9058E-00 | 2.0239E-00 | 2.1591E-00 |
| .6 | 2.0095E-00 | 2.1438E-00 | 2.2969E-00 | 2.4728E-00 |
| .7 | 2.2711E-00 | 2.4450E-00 | 2.6441E-00 | 2.8739E-00 |
| .8 | 2.5954E-00 | 2.8205E-00 | 3.0797E-00 | 3.3803E-00 |
| .9 | 2.9937E-00 | 3.2847E-00 | 3.6215E-00 | 4.0144E-00 |
| 1.0 | 3.4798E-00 | 3.8550E-00 | 4.2919E-00 | 4.8046E-00 |
| 1.1 | 4.0708E-00 | 4.5533E-00 | 5.1187E-00 | 5.7864E-00 |
| 1.2 | 4.7875E-00 | 5.4065E-00 | 6.1365E-00 | 7.0045E-00 |
| 1.3 | 5.6554E-00 | 6.4476E-00 | 7.3883E-00 | 8.5144E-00 |
| 1.4 | 6.7055E-00 | 7.7172E-00 | 8.9271E-00 | 1.0385E+01 |
| 1.5 | 7.9757E-00 | 9.2652E-00 | 1.0818E+01 | 1.2705E+01 |
| 1.6 | 9.5118E-00 | 1.1152E+01 | 1.3144E+01 | 1.5580E+01 |
| 1.7 | 1.1369E+01 | 1.3454E+01 | 1.6004E+01 | 1.9147E+01 |
| 1.8 | 1.3618E+01 | 1.6263E+01 | 1.9523E+01 | 2.3573E+01 |
| 1.9 | 1.6339E+01 | 1.9692E+01 | 2.3856E+01 | 2.9069E+01 |
| 2.0 | 1.9634E+01 | 2.3878E+01 | 2.9192E+01 | 3.5896E+01 |
| 2.1 | 2.3625E+01 | 2.8994E+01 | 3.5768E+01 | 4.4382E+01 |
| 2.2 | 2.8462E+01 | 3.5246E+01 | 4.3875E+01 | 5.4936E+01 |
| 2.3 | 3.4328E+01 | 4.2893E+01 | 5.3876E+01 | 6.8069E+01 |
| 2.4 | 4.1443E+01 | 5.2249E+01 | 6.6220E+01 | 8.4418E+01 |
| 2.5 | 5.0077E+01 | 6.3703E+01 | 8.1461E+01 | 1.0478E+02 |
| 2.6 | 6.0560E+01 | 7.7729E+01 | 1.0028E+02 | 1.3016E+02 |
| 2.7 | 7.3294E+01 | 9.4913E+01 | 1.2355E+02 | 1.6179E+02 |
| 2.8 | 8.8765E+01 | 1.1597E+02 | 1.5232E+02 | 2.0125E+02 |
| 2.9 | 1.0757E+02 | 1.4180E+02 | 1.8791E+02 | 2.5049E+02 |
| 3.0 | 1.3044E+02 | 1.7348E+02 | 2.3194E+02 | 3.1194E+02 |
| 3.1 | 1.5826E+02 | 2.1235E+02 | 2.8644E+02 | 3.8868E+02 |
| 3.2 | 1.9211E+02 | 2.6006E+02 | 3.5392E+02 | 4.8453E+02 |
| 3.3 | 2.3332E+02 | 3.1865E+02 | 4.3751E+02 | 6.0430E+02 |
| 3.4 | 2.8349E+02 | 3.9061E+02 | 5.4108E+02 | 7.5400E+02 |
| 3.5 | 3.4460E+02 | 4.7902E+02 | 6.6944E+02 | 9.4116E+02 |
| 3.6 | 4.1905E+02 | 5.8768E+02 | 8.2858E+02 | 1.1752E+03 |
| 3.7 | 5.0978E+02 | 7.2126E+02 | 1.0259E+03 | 1.4680E+03 |
| 3.8 | 6.2038E+02 | 8.8551E+02 | 1.2707E+03 | 1.8344E+03 |
| 3.9 | 7.5522E+02 | 1.0875E+03 | 1.5744E+03 | 2.2931E+03 |
| 4.0 | 9.1968E+02 | 1.3360E+03 | 1.9513E+03 | 2.8672E+03 |
| 4.1 | 1.1202E+03 | 1.6418E+03 | 2.4192E+03 | 3.5862E+03 |
| 4.2 | 1.3650E+03 | 2.0183E+03 | 3.0001E+03 | 4.4868E+03 |
| 4.3 | 1.6637E+03 | 2.4817E+03 | 3.7216E+03 | 5.6150E+03 |
| 4.4 | 2.0283E+03 | 3.0522E+03 | 4.6177E+03 | 7.0286E+03 |
| 4.5 | 2.4735E+03 | 3.7549E+03 | 5.7310E+03 | 8.8003E+03 |
| 4.6 | 3.0170E+03 | 4.6205E+03 | 7.1144E+03 | 1.1021E+04 |
| 4.7 | 3.6809E+03 | 5.6869E+03 | 8.8337E+03 | 1.3805E+04 |
| 4.8 | 4.4918E+03 | 7.0010E+03 | 1.0970E+04 | 1.7297E+04 |
| 4.9 | 5.4825E+03 | 8.6205E+03 | 1.3627E+04 | 2.1675E+04 |
| 5.0 | 6.6931E+03 | 1.0616E+04 | 1.6931E+04 | 2.7168E+04 |

$$P_{-\frac{1}{2}+ib}(\cos\theta)$$

| b | θ 135 | 140 | 145 | 150 |
|---|---|---|---|---|
| .0 | 1.5279E-00 | 1.5944E-00 | 1.6714E-00 | 1.7622E-00 |
| .1 | 1.5511E-00 | 1.6207E-00 | 1.7014E-00 | 1.7964E-00 |
| .2 | 1.6216E-00 | 1.7008E-00 | 1.7927E-00 | 1.9011E-00 |
| .3 | 1.7426E-00 | 1.8385E-00 | 1.9500E-00 | 2.0818E-00 |
| .4 | 1.9192E-00 | 2.0402E-00 | 2.1812E-00 | 2.3483E-00 |
| .5 | 2.1591E-00 | 2.3153E-00 | 2.4979E-00 | 2.7152E-00 |
| .6 | 2.4728E-00 | 2.6767E-00 | 2.9163E-00 | 3.2025E-00 |
| .7 | 2.8739E-00 | 3.1418E-00 | 3.4578E-00 | 3.8369E-00 |
| .8 | 3.3803E-00 | 3.7325E-00 | 4.1502E-00 | 4.6538E-00 |
| .9 | 4.0144E-00 | 4.4773E-00 | 5.0293E-00 | 5.6986E-00 |
| 1.0 | 4.8046E-00 | 5.4121E-00 | 6.1412E-00 | 7.0301E-00 |
| 1.1 | 5.7864E-00 | 6.5827E-00 | 7.5442E-00 | 8.7239E-00 |
| 1.2 | 7.0045E-00 | 8.0464E-00 | 9.3127E-00 | 1.0876E+01 |
| 1.3 | 8.5144E-00 | 9.8756E-00 | 1.1541E+01 | 1.3611E+01 |
| 1.4 | 1.0385E+01 | 1.2161E+01 | 1.4349E+01 | 1.7087E+01 |
| 1.5 | 1.2705E+01 | 1.5018E+01 | 1.7888E+01 | 2.1507E+01 |
| 1.6 | 1.5580E+01 | 1.8590E+01 | 2.2352E+01 | 2.7129E+01 |
| 1.7 | 1.9147E+01 | 2.3058E+01 | 2.7985E+01 | 3.4286E+01 |
| 1.8 | 2.3573E+01 | 2.8651E+01 | 3.5096E+01 | 4.3401E+01 |
| 1.9 | 2.9069E+01 | 3.5656E+01 | 4.4080E+01 | 5.5019E+01 |
| 2.0 | 3.5896E+01 | 4.4434E+01 | 5.5438E+01 | 6.9835E+01 |
| 2.1 | 4.4382E+01 | 5.5440E+01 | 6.9803E+01 | 8.8741E+01 |
| 2.2 | 5.4936E+01 | 6.9248E+01 | 8.7984E+01 | 1.1288E+02 |
| 2.3 | 6.8069E+01 | 8.6580E+01 | 1.1100E+02 | 1.4372E+02 |
| 2.4 | 8.4418E+01 | 1.0834E+02 | 1.4017E+02 | 1.8314E+02 |
| 2.5 | 1.0478E+02 | 1.3569E+02 | 1.7714E+02 | 2.3355E+02 |
| 2.6 | 1.3016E+02 | 1.7008E+02 | 2.2403E+02 | 2.9805E+02 |
| 2.7 | 1.6179E+02 | 2.1332E+02 | 2.8353E+02 | 3.8061E+02 |
| 2.8 | 2.0125E+02 | 2.6772E+02 | 3.5904E+02 | 4.8634E+02 |
| 2.9 | 2.5049E+02 | 3.3620E+02 | 4.5493E+02 | 6.2179E+02 |
| 3.0 | 3.1194E+02 | 4.2243E+02 | 5.7674E+02 | 7.9537E+02 |
| 3.1 | 3.8868E+02 | 5.3105E+02 | 7.3154E+02 | 1.0179E+03 |
| 3.2 | 4.8453E+02 | 6.6793E+02 | 9.2832E+02 | 1.3033E+03 |
| 3.3 | 6.0430E+02 | 8.4046E+02 | 1.1785E+03 | 1.6694E+03 |
| 3.4 | 7.5400E+02 | 1.0580E+03 | 1.4968E+03 | 2.1393E+03 |
| 3.5 | 9.4116E+02 | 1.3323E+03 | 1.9018E+03 | 2.7426E+03 |
| 3.6 | 1.1752E+03 | 1.6785E+03 | 2.4173E+03 | 3.5171E+03 |
| 3.7 | 1.4680E+03 | 2.1154E+03 | 3.0736E+03 | 4.5120E+03 |
| 3.8 | 1.8344E+03 | 2.6669E+03 | 3.9094E+03 | 5.7901E+03 |
| 3.9 | 2.2931E+03 | 3.3632E+03 | 4.9741E+03 | 7.4325E+03 |
| 4.0 | 2.8672E+03 | 4.2427E+03 | 6.3305E+03 | 9.5437E+03 |
| 4.1 | 3.5862E+03 | 5.3536E+03 | 8.0591E+03 | 1.2258E+04 |
| 4.2 | 4.4868E+03 | 6.7573E+03 | 1.0262E+04 | 1.5748E+04 |
| 4.3 | 5.6150E+03 | 8.5314E+03 | 1.3071E+04 | 2.0237E+04 |
| 4.4 | 7.0286E+03 | 1.0773E+04 | 1.6654E+04 | 2.6013E+04 |
| 4.5 | 8.8003E+03 | 1.3609E+04 | 2.1223E+04 | 3.3444E+04 |
| 4.6 | 1.1021E+04 | 1.7194E+04 | 2.7051E+04 | 4.3007E+04 |
| 4.7 | 1.3805E+04 | 2.1728E+04 | 3.4488E+04 | 5.5318E+04 |
| 4.8 | 1.7297E+04 | 2.7464E+04 | 4.3979E+04 | 7.1166E+04 |
| 4.9 | 2.1675E+04 | 3.4721E+04 | 5.6092E+04 | 9.1572E+04 |
| 5.0 | 2.7168E+04 | 4.3905E+04 | 7.1555E+04 | 1.1785E+05 |

$$P_{-\frac{1}{2}+ib}(\cos\theta)$$

| $\theta$ \ b | 150 | 155 | 160 | 165 |
|---|---|---|---|---|
| .0 | 1.7622E-00 | 1.8714E-00 | 2.0075E-00 | 2.1854E-00 |
| .1 | 1.7964E-00 | 1.9110E-00 | 2.0536E-00 | 2.2402E-00 |
| .2 | 1.9011E-00 | 2.0319E-00 | 2.1949E-00 | 2.4084E-00 |
| .3 | 2.0818E-00 | 2.2411E-00 | 2.4401E-00 | 2.7012E-00 |
| .4 | 2.3483E-00 | 2.5509E-00 | 2.8046E-00 | 3.1383E-00 |
| .5 | 2.7152E-00 | 2.9794E-00 | 3.3113E-00 | 3.7492E-00 |
| .6 | 3.2025E-00 | 3.5518E-00 | 3.9922E-00 | 4.5754E-00 |
| .7 | 3.8369E-00 | 4.3019E-00 | 4.8906E-00 | 5.6735E-00 |
| .8 | 4.6538E-00 | 5.2745E-00 | 6.0641E-00 | 7.1189E-00 |
| .9 | 5.6986E-00 | 6.5279E-00 | 7.5885E-00 | 9.0120E-00 |
| 1.0 | 7.0301E-00 | 8.1381E-00 | 9.5628E-00 | 1.1485E+01 |
| 1.1 | 8.7239E-00 | 1.0203E+01 | 1.2116E+01 | 1.4712E+01 |
| 1.2 | 1.0876E+01 | 1.2849E+01 | 1.5417E+01 | 1.8921E+01 |
| 1.3 | 1.3611E+01 | 1.6241E+01 | 1.9685E+01 | 2.4413E+01 |
| 1.4 | 1.7087E+01 | 2.0589E+01 | 2.5206E+01 | 3.1583E+01 |
| 1.5 | 2.1507E+01 | 2.6167E+01 | 3.2350E+01 | 4.0947E+01 |
| 1.6 | 2.7129E+01 | 3.3324E+01 | 4.1601E+01 | 5.3185E+01 |
| 1.7 | 3.4286E+01 | 4.2516E+01 | 5.3590E+01 | 6.9191E+01 |
| 1.8 | 4.3401E+01 | 5.4328E+01 | 6.9135E+01 | 9.0140E+01 |
| 1.9 | 5.5019E+01 | 6.9517E+01 | 8.9307E+01 | 1.1757E+02 |
| 2.0 | 6.9835E+01 | 8.9062E+01 | 1.1549E+02 | 1.5352E+02 |
| 2.1 | 8.8741E+01 | 1.1422E+02 | 1.4952E+02 | 2.0066E+02 |
| 2.2 | 1.1288E+02 | 1.4664E+02 | 1.9375E+02 | 2.6250E+02 |
| 2.3 | 1.4372E+02 | 1.8842E+02 | 2.5128E+02 | 3.4368E+02 |
| 2.4 | 1.8314E+02 | 2.4231E+02 | 3.2615E+02 | 4.5029E+02 |
| 2.5 | 2.3355E+02 | 3.1184E+02 | 4.2362E+02 | 5.9038E+02 |
| 2.6 | 2.9805E+02 | 4.0160E+02 | 5.5058E+02 | 7.7452E+02 |
| 2.7 | 3.8061E+02 | 5.1751E+02 | 7.1603E+02 | 1.0166E+03 |
| 2.8 | 4.8634E+02 | 6.6728E+02 | 9.3173E+02 | 1.3352E+03 |
| 2.9 | 6.2179E+02 | 8.6086E+02 | 1.2130E+03 | 1.7545E+03 |
| 3.0 | 7.9537E+02 | 1.1111E+03 | 1.5800E+03 | 2.3065E+03 |
| 3.1 | 1.0179E+03 | 1.4349E+03 | 2.0590E+03 | 3.0335E+03 |
| 3.2 | 1.3033E+03 | 1.8538E+03 | 2.6843E+03 | 3.9913E+03 |
| 3.3 | 1.6694E+03 | 2.3960E+03 | 3.5009E+03 | 5.2534E+03 |
| 3.4 | 2.1393E+03 | 3.0981E+03 | 4.5678E+03 | 6.9173E+03 |
| 3.5 | 2.7425E+03 | 4.0073E+03 | 5.9619E+03 | 9.1111E+03 |
| 3.6 | 3.5171E+03 | 5.1852E+03 | 7.7840E+03 | 1.2004E+04 |
| 3.7 | 4.5119E+03 | 6.7116E+03 | 1.0166E+04 | 1.5822E+04 |
| 3.8 | 5.7901E+03 | 8.6900E+03 | 1.3282E+04 | 2.0859E+04 |
| 3.9 | 7.4325E+03 | 1.1255E+04 | 1.7357E+04 | 2.7507E+04 |
| 4.0 | 9.5437E+03 | 1.4581E+04 | 2.2689E+04 | 3.6285E+04 |
| 4.1 | 1.2257E+04 | 1.8895E+04 | 2.9667E+04 | 4.7875E+04 |
| 4.2 | 1.5748E+04 | 2.4492E+04 | 3.8800E+04 | 6.3181E+04 |
| 4.3 | 2.0237E+04 | 3.1755E+04 | 5.0758E+04 | 8.3401E+04 |
| 4.4 | 2.6012E+04 | 4.1182E+04 | 6.6416E+04 | 1.1011E+05 |
| 4.5 | 3.3444E+04 | 5.3419E+04 | 8.6922E+04 | 1.4542E+05 |
| 4.6 | 4.3007E+04 | 6.9306E+04 | 1.1378E+05 | 1.9207E+05 |
| 4.7 | 5.5317E+04 | 8.9938E+04 | 1.4897E+05 | 2.5375E+05 |
| 4.8 | 7.1165E+04 | 1.1673E+05 | 1.9509E+05 | 3.3530E+05 |
| 4.9 | 9.1571E+04 | 1.5154E+05 | 2.5553E+05 | 4.4313E+05 |
| 5.0 | 1.1785E+05 | 1.9676E+05 | 3.3475E+05 | 5.8574E+05 |

$$P_{-\frac{1}{2}+i D}(\cos \theta)$$

| $\theta$ b | 165 | 170 | 175 | 180 |
|---|---|---|---|---|
| .0 | 2.1854E-00 | 2.4393E-00 | 2.8776E-00 | ∞ |
| .1 | 2.2402E-00 | 2.5067E-00 | 2.9667E-00 | ∞ |
| .2 | 2.4084E-00 | 2.7135E-00 | 3.2408E-00 | ∞ |
| .3 | 2.7012E-00 | 3.0749E-00 | 3.7215E-00 | ∞ |
| .4 | 3.1383E-00 | 3.6169E-00 | 4.4466E-00 | ∞ |
| .5 | 3.7492E-00 | 4.3790E-00 | 5.4733E-00 | ∞ |
| .6 | 4.5754E-00 | 5.4169E-00 | 6.8831E-00 | ∞ |
| .7 | 5.6735E-00 | 6.8072E-00 | 8.7885E-00 | ∞ |
| .8 | 7.1189E-00 | 8.6527E-00 | 1.1342E+01 | ∞ |
| .9 | 9.0120E-00 | 1.1091E+01 | 1.4751E+01 | |
| 1.0 | 1.1485E+01 | 1.4306E+01 | 1.9293E+01 | ∞ |
| 1.1 | 1.4712E+01 | 1.8541E+01 | 2.5339E+01 | ∞ |
| 1.2 | 1.8921E+01 | 2.4118E+01 | 3.3386E+01 | ∞ |
| 1.3 | 2.4413E+01 | 3.1464E+01 | 4.4101E+01 | ∞ |
| 1.4 | 3.1583E+01 | 4.1147E+01 | 5.8375E+01 | ∞ |
| 1.5 | 4.0947E+01 | 5.3917E+01 | 7.7401E+01 | ∞ |
| 1.6 | 5.3185E+01 | 7.0769E+01 | 1.0277E+02 | ∞ |
| 1.7 | 6.9191E+01 | 9.3022E+01 | 1.3664E+02 | ∞ |
| 1.8 | 9.0140E+01 | 1.2242E+02 | 1.8185E+02 | ∞ |
| 1.9 | 1.1757E+02 | 1.6131E+02 | 2.4227E+02 | ∞ |
| 2.0 | 1.5352E+02 | 2.1275E+02 | 3.2304E+02 | ∞ |
| 2.1 | 2.0066E+02 | 2.8084E+02 | 4.3106E+02 | ∞ |
| 2.2 | 2.6250E+02 | 3.7104E+02 | 5.7561E+02 | ∞ |
| 2.3 | 3.4368E+02 | 4.9056E+02 | 7.6911E+02 | ∞ |
| 2.4 | 4.5029E+02 | 6.4901E+02 | 1.0282E+03 | ∞ |
| 2.5 | 5.9038E+02 | 8.5919E+02 | 1.3755E+03 | ∞ |
| 2.6 | 7.7452E+02 | 1.1380E+03 | 1.8408E+03 | ∞ |
| 2.7 | 1.0166E+03 | 1.5082E+03 | 2.4648E+03 | ∞ |
| 2.8 | 1.3352E+03 | 1.9999E+03 | 3.3017E+03 | ∞ |
| 2.9 | 1.7545E+03 | 2.6529E+03 | 4.4245E+03 | ∞ |
| 3.0 | 2.3065E+03 | 3.5208E+03 | 5.9314E+03 | ∞ |
| 3.1 | 3.0335E+03 | 4.6744E+03 | 7.9543E+03 | ∞ |
| 3.2 | 3.9913E+03 | 6.2084E+03 | 1.0670E+04 | ∞ |
| 3.3 | 5.2534E+03 | 8.2487E+03 | 1.4318E+04 | ∞ |
| 3.4 | 6.9173E+03 | 1.0963E+04 | 1.9220E+04 | ∞ |
| 3.5 | 9.1111E+03 | 1.4575E+04 | 2.5806E+04 | ∞ |
| 3.6 | 1.2004E+04 | 1.9384E+04 | 3.4658E+04 | ∞ |
| 3.7 | 1.5822E+04 | 2.5786E+04 | 4.6558E+04 | ∞ |
| 3.8 | 2.0859E+04 | 3.4312E+04 | 6.2558E+04 | ∞ |
| 3.9 | 2.7507E+04 | 4.5669E+04 | 8.4077E+04 | ∞ |
| 4.0 | 3.6285E+04 | 6.0800E+04 | 1.1302E+05 | ∞ |
| 4.1 | 4.7875E+04 | 8.0963E+04 | 1.5196E+05 | ∞ |
| 4.2 | 6.3181E+04 | 1.0783E+05 | 2.0436E+05 | ∞ |
| 4.3 | 8.3401E+04 | 1.4366E+05 | 2.7487E+05 | ∞ |
| 4.4 | 1.1011E+05 | 1.9142E+05 | 3.6979E+05 | ∞ |
| 4.5 | 1.4542E+05 | 2.5512E+05 | 4.9756E+05 | ∞ |
| 4.6 | 1.9207E+05 | 3.4007E+05 | 6.6959E+05 | ∞ |
| 4.7 | 2.5375E+05 | 4.5339E+05 | 9.0125E+05 | ∞ |
| 4.8 | 3.3530E+05 | 6.0457E+05 | 1.2132E+06 | ∞ |
| 4.9 | 4.4313E+05 | 8.0631E+05 | 1.6334E+06 | ∞ |
| 5.0 | 5.8574E+05 | 1.0755E+06 | 2.1995E+06 | ∞ |

TABLE IV

Table of $dP_{-\frac{1}{2}+ib}(\cos\theta)/d\theta$:  Five Significant Figures

$\theta = 0$ (5°) 175°

$b = 0$ (0.1) 5.0

$$\frac{dP_{-\frac{1}{2}+ib}(\cos\theta)}{d\theta}$$

| b | θ   0 | 5 | 10 | 15 |
|---|---|---|---|---|
| .0 | 0 | 1.0917E-02 | 2.1892E-02 | 3.2983E-02 |
| .1 | 0 | 1.1354E-02 | 2.2769E-02 | 3.4305E-02 |
| .2 | 0 | 1.2665E-02 | 2.5399E-02 | 3.8274E-02 |
| .3 | 0 | 1.4849E-02 | 2.9784E-02 | 4.4892E-02 |
| .4 | 0 | 1.7907E-02 | 3.5926E-02 | 5.4167E-02 |
| .5 | 0 | 2.1840E-02 | 4.3827E-02 | 6.6108E-02 |
| .6 | 0 | 2.6648E-02 | 5.3492E-02 | 8.0728E-02 |
| .7 | 0 | 3.2331E-02 | 6.4924E-02 | 9.8041E-02 |
| .8 | 0 | 3.8891E-02 | 7.8129E-02 | 1.1806E-01 |
| .9 | 0 | 4.6327E-02 | 9.3112E-02 | 1.4082E-01 |
| 1.0 | 0 | 5.4641E-02 | 1.0988E-01 | 1.6633E-01 |
| 1.1 | 0 | 6.3833E-02 | 1.2844E-01 | 1.9462E-01 |
| 1.2 | 0 | 7.3905E-02 | 1.4880E-01 | 2.2572E-01 |
| 1.3 | 0 | 8.4858E-02 | 1.7098E-01 | 2.5967E-01 |
| 1.4 | 0 | 9.6693E-02 | 1.9498E-01 | 2.9649E-01 |
| 1.5 | 0 | 1.0941E-01 | 2.2081E-01 | 3.3623E-01 |
| 1.6 | 0 | 1.2301E-01 | 2.4848E-01 | 3.7892E-01 |
| 1.7 | 0 | 1.3750E-01 | 2.7801E-01 | 4.2460E-01 |
| 1.8 | 0 | 1.5288E-01 | 3.0941E-01 | 4.7334E-01 |
| 1.9 | 0 | 1.6915E-01 | 3.4269E-01 | 5.2517E-01 |
| 2.0 | 0 | 1.8631E-01 | 3.7787E-01 | 5.8014E-01 |
| 2.1 | 0 | 2.0436E-01 | 4.1497E-01 | 6.3832E-01 |
| 2.2 | 0 | 2.2331E-01 | 4.5400E-01 | 6.9976E-01 |
| 2.3 | 0 | 2.4315E-01 | 4.9498E-01 | 7.6452E-01 |
| 2.4 | 0 | 2.6390E-01 | 5.3793E-01 | 8.3267E-01 |
| 2.5 | 0 | 2.8555E-01 | 5.8286E-01 | 9.0428E-01 |
| 2.6 | 0 | 3.0811E-01 | 6.2981E-01 | 9.7943E-01 |
| 2.7 | 0 | 3.3157E-01 | 6.7878E-01 | 1.0581E-00 |
| 2.8 | 0 | 3.5594E-01 | 7.2981E-01 | 1.1406E-00 |
| 2.9 | 0 | 3.8122E-01 | 7.8291E-01 | 1.2268E-00 |
| 3.0 | 0 | 4.0743E-01 | 8.3811E-01 | 1.3168E-00 |
| 3.1 | 0 | 4.3455E-01 | 8.9543E-01 | 1.4108E-00 |
| 3.2 | 0 | 4.6259E-01 | 9.5490E-01 | 1.5089E-00 |
| 3.3 | 0 | 4.9155E-01 | 1.0165E-00 | 1.6111E-00 |
| 3.4 | 0 | 5.2145E-01 | 1.0804E-00 | 1.7175E-00 |
| 3.5 | 0 | 5.5228E-01 | 1.1464E-00 | 1.8282E-00 |
| 3.6 | 0 | 5.8404E-01 | 1.2148E-00 | 1.9435E-00 |
| 3.7 | 0 | 6.1674E-01 | 1.2854E-00 | 2.0633E-00 |
| 3.8 | 0 | 6.5038E-01 | 1.3584E-00 | 2.1878E-00 |
| 3.9 | 0 | 6.8498E-01 | 1.4337E-00 | 2.3170E-00 |
| 4.0 | 0 | 7.2052E-01 | 1.5114E-00 | 2.4513E-00 |
| 4.1 | 0 | 7.5701E-01 | 1.5916E-00 | 2.5906E-00 |
| 4.2 | 0 | 7.9447E-01 | 1.6742E-00 | 2.7351E-00 |
| 4.3 | 0 | 8.3288E-01 | 1.7593E-00 | 2.8850E-00 |
| 4.4 | 0 | 8.7227E-01 | 1.8469E-00 | 3.0404E-00 |
| 4.5 | 0 | 9.1262E-01 | 1.9372E-00 | 3.2014E-00 |
| 4.6 | 0 | 9.5396E-01 | 2.0300E-00 | 3.3682E-00 |
| 4.7 | 0 | 9.9627E-01 | 2.1255E-00 | 3.5411E-00 |
| 4.8 | 0 | 1.0395E-00 | 2.2237E-00 | 3.7200E-00 |
| 4.9 | 0 | 1.0838E-00 | 2.3246E-00 | 3.9053E-00 |
| 5.0 | 0 | 1.1291E-00 | 2.4283E-00 | 4.0971E-00 |

$$dP_{-\frac{1}{2}+ib}(\cos\theta)/d\theta$$

| b | θ  15 | 20 | 25 | 30 |
|---|---|---|---|---|
| .0 | 3.2983E-02 | 4.4249E-02 | 5.5754E-02 | 6.7562E-02 |
| .1 | 3.4305E-02 | 4.6026E-02 | 5.7997E-02 | 7.0289E-02 |
| .2 | 3.8274E-02 | 5.1361E-02 | 6.4736E-02 | 7.8480E-02 |
| .3 | 4.4892E-02 | 6.0262E-02 | 7.5987E-02 | 9.2168E-02 |
| .4 | 5.4167E-02 | 7.2746E-02 | 9.1784E-02 | 1.1140E-01 |
| .5 | 6.6108E-02 | 8.8836E-02 | 1.1217E-01 | 1.3628E-01 |
| .6 | 8.0728E-02 | 1.0856E-01 | 1.3720E-01 | 1.6688E-01 |
| .7 | 9.8041E-02 | 1.3195E-01 | 1.6696E-01 | 2.0335E-01 |
| .8 | 1.1806E-01 | 1.5906E-01 | 2.0151E-01 | 2.4582E-01 |
| .9 | 1.4082E-01 | 1.8994E-01 | 2.4097E-01 | 2.9446E-01 |
| 1.0 | 1.6633E-01 | 2.2463E-01 | 2.8544E-01 | 3.4948E-01 |
| 1.1 | 1.9462E-01 | 2.6320E-01 | 3.3505E-01 | 4.1110E-01 |
| 1.2 | 2.2572E-01 | 3.0572E-01 | 3.8993E-01 | 4.7956E-01 |
| 1.3 | 2.5967E-01 | 3.5228E-01 | 4.5025E-01 | 5.5515E-01 |
| 1.4 | 2.9649E-01 | 4.0294E-01 | 5.1616E-01 | 6.3815E-01 |
| 1.5 | 3.3623E-01 | 4.5781E-01 | 5.8787E-01 | 7.2892E-01 |
| 1.6 | 3.7892E-01 | 5.1698E-01 | 6.6555E-01 | 8.2780E-01 |
| 1.7 | 4.2460E-01 | 5.8057E-01 | 7.4945E-01 | 9.3519E-01 |
| 1.8 | 4.7334E-01 | 6.4867E-01 | 8.3977E-01 | 1.0515E-00 |
| 1.9 | 5.2517E-01 | 7.2142E-01 | 9.3679E-01 | 1.1772E-00 |
| 2.0 | 5.8014E-01 | 7.9895E-01 | 1.0407E-00 | 1.3128E-00 |
| 2.1 | 6.3832E-01 | 8.8139E-01 | 1.1519E-00 | 1.4589E-00 |
| 2.2 | 6.9976E-01 | 9.6890E-01 | 1.2707E-00 | 1.6159E-00 |
| 2.3 | 7.6452E-01 | 1.0616E-00 | 1.3973E-00 | 1.7846E-00 |
| 2.4 | 8.3267E-01 | 1.1597E-00 | 1.5322E-00 | 1.9655E-00 |
| 2.5 | 9.0428E-01 | 1.2633E-00 | 1.6757E-00 | 2.1595E-00 |
| 2.6 | 9.7943E-01 | 1.3728E-00 | 1.8281E-00 | 2.3671E-00 |
| 2.7 | 1.0581E-00 | 1.4881E-00 | 1.9900E-00 | 2.5892E-00 |
| 2.8 | 1.1406E-00 | 1.6096E-00 | 2.1616E-00 | 2.8268E-00 |
| 2.9 | 1.2268E-00 | 1.7374E-00 | 2.3436E-00 | 3.0806E-00 |
| 3.0 | 1.3168E-00 | 1.8718E-00 | 2.5364E-00 | 3.3517E-00 |
| 3.1 | 1.4108E-00 | 2.0130E-00 | 2.7405E-00 | 3.6410E-00 |
| 3.2 | 1.5089E-00 | 2.1613E-00 | 2.9564E-00 | 3.9497E-00 |
| 3.3 | 1.6111E-00 | 2.3169E-00 | 3.1848E-00 | 4.2790E-00 |
| 3.4 | 1.7175E-00 | 2.4801E-00 | 3.4263E-00 | 4.6300E-00 |
| 3.5 | 1.8282E-00 | 2.6512E-00 | 3.6814E-00 | 5.0041E-00 |
| 3.6 | 1.9435E-00 | 2.8304E-00 | 3.9509E-00 | 5.4027E-00 |
| 3.7 | 2.0633E-00 | 3.0181E-00 | 4.2354E-00 | 5.8273E-00 |
| 3.8 | 2.1878E-00 | 3.2146E-00 | 4.5358E-00 | 6.2794E-00 |
| 3.9 | 2.3170E-00 | 3.4203E-00 | 4.8528E-00 | 6.7607E-00 |
| 4.0 | 2.4513E-00 | 3.6354E-00 | 5.1872E-00 | 7.2730E-00 |
| 4.1 | 2.5906E-00 | 3.8604E-00 | 5.5400E-00 | 7.8181E-00 |
| 4.2 | 2.7351E-00 | 4.0957E-00 | 5.9120E-00 | 8.3981E-00 |
| 4.3 | 2.8850E-00 | 4.3416E-00 | 6.3042E-00 | 9.0150E-00 |
| 4.4 | 3.0404E-00 | 4.5986E-00 | 6.7175E-00 | 9.6711E-00 |
| 4.5 | 3.2014E-00 | 4.8670E-00 | 7.1532E-00 | 1.0368E+01 |
| 4.6 | 3.3682E-00 | 5.1475E-00 | 7.6122E-00 | 1.1110E+01 |
| 4.7 | 3.5411E-00 | 5.4403E-00 | 8.0959E-00 | 1.1899E+01 |
| 4.8 | 3.7200E-00 | 5.7461E-00 | 8.6053E-00 | 1.2737E+01 |
| 4.9 | 3.9053E-00 | 6.0654E-00 | 9.1418E-00 | 1.3627E+01 |
| 5.0 | 4.0971E-00 | 6.3986E-00 | 9.7068E-00 | 1.4574E+01 |

$$dP_{-\frac{1}{2}+ib}(\cos\theta)/d\theta$$

| b \ θ | 30 | 35 | 40 | 45 |
|---|---|---|---|---|
| .0 | 6.7562E-02 | 7.9747E-02 | 9.2385E-02 | 1.0556E-01 |
| .1 | 7.0289E-02 | 8.2975E-02 | 9.6138E-02 | 1.0986E-01 |
| .2 | 7.8480E-02 | 9.2678E-02 | 1.0742E-01 | 1.2282E-01 |
| .3 | 9.2168E-02 | 1.0891E-01 | 1.2633E-01 | 1.4455E-01 |
| .4 | 1.1140E-01 | 1.3176E-01 | 1.5298E-01 | 1.7525E-01 |
| .5 | 1.3628E-01 | 1.6135E-01 | 1.8758E-01 | 2.1519E-01 |
| .6 | 1.6688E-01 | 1.9785E-01 | 2.3037E-01 | 2.6473E-01 |
| .7 | 2.0335E-01 | 2.4146E-01 | 2.8166E-01 | 3.2433E-01 |
| .8 | 2.4582E-01 | 2.9242E-01 | 3.4181E-01 | 3.9452E-01 |
| .9 | 2.9446E-01 | 3.5101E-01 | 4.1126E-01 | 4.7593E-01 |
| 1.0 | 3.4948E-01 | 4.1755E-01 | 4.9049E-01 | 5.6928E-01 |
| 1.1 | 4.1110E-01 | 4.9240E-01 | 5.8007E-01 | 6.7541E-01 |
| 1.2 | 4.7956E-01 | 5.7597E-01 | 6.8064E-01 | 7.9526E-01 |
| 1.3 | 5.5515E-01 | 6.6871E-01 | 7.9289E-01 | 9.2988E-01 |
| 1.4 | 6.3815E-01 | 7.7114E-01 | 9.1762E-01 | 1.0804E-00 |
| 1.5 | 7.2892E-01 | 8.8379E-01 | 1.0557E-00 | 1.2483E-00 |
| 1.6 | 8.2780E-01 | 1.0072E-00 | 1.2080E-00 | 1.4349E-00 |
| 1.7 | 9.3519E-01 | 1.1422E-00 | 1.3758E-00 | 1.6418E-00 |
| 1.8 | 1.0515E-00 | 1.2894E-00 | 1.5601E-00 | 1.8709E-00 |
| 1.9 | 1.1772E-00 | 1.4497E-00 | 1.7621E-00 | 2.1242E-00 |
| 2.0 | 1.3128E-00 | 1.6237E-00 | 1.9834E-00 | 2.4036E-00 |
| 2.1 | 1.4589E-00 | 1.8126E-00 | 2.2253E-00 | 2.7117E-00 |
| 2.2 | 1.6159E-00 | 2.0172E-00 | 2.4895E-00 | 3.0511E-00 |
| 2.3 | 1.7846E-00 | 2.2386E-00 | 2.7778E-00 | 3.4246E-00 |
| 2.4 | 1.9655E-00 | 2.4781E-00 | 3.0921E-00 | 3.8352E-00 |
| 2.5 | 2.1595E-00 | 2.7368E-00 | 3.4346E-00 | 4.2865E-00 |
| 2.6 | 2.3671E-00 | 3.0160E-00 | 3.8074E-00 | 4.7822E-00 |
| 2.7 | 2.5892E-00 | 3.3173E-00 | 4.2132E-00 | 5.3262E-00 |
| 2.8 | 2.8268E-00 | 3.6421E-00 | 4.6544E-00 | 5.9232E-00 |
| 2.9 | 3.0806E-00 | 3.9922E-00 | 5.1341E-00 | 6.5780E-00 |
| 3.0 | 3.3517E-00 | 4.3692E-00 | 5.6554E-00 | 7.2958E-00 |
| 3.1 | 3.6410E-00 | 4.7752E-00 | 6.2216E-00 | 8.0825E-00 |
| 3.2 | 3.9497E-00 | 5.2122E-00 | 6.8364E-00 | 8.9443E-00 |
| 3.3 | 4.2790E-00 | 5.6822E-00 | 7.5037E-00 | 9.8883E-00 |
| 3.4 | 4.6300E-00 | 6.1879E-00 | 8.2279E-00 | 1.0921E+01 |
| 3.5 | 5.0041E-00 | 6.7315E-00 | 9.0136E-00 | 1.2053E+01 |
| 3.6 | 5.4027E-00 | 7.3159E-00 | 9.8657E-00 | 1.3291E+01 |
| 3.7 | 5.8273E-00 | 7.9439E-00 | 1.0789E+01 | 1.4645E+01 |
| 3.8 | 6.2794E-00 | 8.6186E-00 | 1.1791E+01 | 1.6127E+01 |
| 3.9 | 6.7607E-00 | 9.3433E-00 | 1.2876E+01 | 1.7747E+01 |
| 4.0 | 7.2730E-00 | 1.0121E+01 | 1.4053E+01 | 1.9518E+01 |
| 4.1 | 7.8181E-00 | 1.0957E+01 | 1.5327E+01 | 2.1455E+01 |
| 4.2 | 8.3981E-00 | 1.1854E+01 | 1.6708E+01 | 2.3571E+01 |
| 4.3 | 9.0150E-00 | 1.2817E+01 | 1.8202E+01 | 2.5883E+01 |
| 4.4 | 9.6711E-00 | 1.3850E+01 | 1.9821E+01 | 2.8409E+01 |
| 4.5 | 1.0368E+01 | 1.4959E+01 | 2.1574E+01 | 3.1168E+01 |
| 4.6 | 1.1110E+01 | 1.6148E+01 | 2.3470E+01 | 3.4182E+01 |
| 4.7 | 1.1899E+01 | 1.7424E+01 | 2.5523E+01 | 3.7472E+01 |
| 4.8 | 1.2737E+01 | 1.8792E+01 | 2.7745E+01 | 4.1064E+01 |
| 4.9 | 1.3627E+01 | 2.0259E+01 | 3.0148E+01 | 4.4985E+01 |
| 5.0 | 1.4574E+01 | 2.1832E+01 | 3.2748E+01 | 4.9264E+01 |

$$\frac{dP_{-\frac{1}{2}+ib}(\cos\theta)}{d\theta}$$

| b | θ 45 | 50 | 55 | 60 |
|---|---|---|---|---|
| .0 | 1.0556E−01 | 1.1937E−01 | 1.3392E−01 | 1.4933E−01 |
| .1 | 1.0986E−01 | 1.2426E−01 | 1.3943E−01 | 1.5551E−01 |
| .2 | 1.2282E−01 | 1.3899E−01 | 1.5606E−01 | 1.7416E−01 |
| .3 | 1.4455E−01 | 1.6372E−01 | 1.8401E−01 | 2.0558E−01 |
| .4 | 1.7525E−01 | 1.9874E−01 | 2.2366E−01 | 2.5025E−01 |
| .5 | 2.1519E−01 | 2.4442E−01 | 2.7555E−01 | 3.0889E−01 |
| .6 | 2.6473E−01 | 3.0128E−01 | 3.4037E−01 | 3.8243E−01 |
| .7 | 3.2433E−01 | 3.6994E−01 | 4.1897E−01 | 4.7202E−01 |
| .8 | 3.9452E−01 | 4.5116E−01 | 5.1241E−01 | 5.7907E−01 |
| .9 | 4.7593E−01 | 5.4584E−01 | 6.2192E−01 | 7.0524E−01 |
| 1.0 | 5.6928E−01 | 6.5501E−01 | 7.4893E−01 | 8.5249E−01 |
| 1.1 | 6.7541E−01 | 7.7987E−01 | 8.9512E−01 | 1.0230E−00 |
| 1.2 | 7.9526E−01 | 9.2176E−01 | 1.0623E−00 | 1.2196E−00 |
| 1.3 | 9.2988E−01 | 1.0822E−00 | 1.2528E−00 | 1.4452E−00 |
| 1.4 | 1.0804E−00 | 1.2629E−00 | 1.4690E−00 | 1.7031E−00 |
| 1.5 | 1.2483E−00 | 1.4659E−00 | 1.7136E−00 | 1.9973E−00 |
| 1.6 | 1.4349E−00 | 1.6933E−00 | 1.9898E−00 | 2.3321E−00 |
| 1.7 | 1.6418E−00 | 1.9474E−00 | 2.3010E−00 | 2.7126E−00 |
| 1.8 | 1.8709E−00 | 2.2311E−00 | 2.6512E−00 | 3.1443E−00 |
| 1.9 | 2.1242E−00 | 2.5471E−00 | 3.0447E−00 | 3.6336E−00 |
| 2.0 | 2.4036E−00 | 2.8988E−00 | 3.4864E−00 | 4.1877E−00 |
| 2.1 | 2.7117E−00 | 3.2899E−00 | 3.9818E−00 | 4.8144E−00 |
| 2.2 | 3.0511E−00 | 3.7244E−00 | 4.5369E−00 | 5.5229E−00 |
| 2.3 | 3.4246E−00 | 4.2066E−00 | 5.1584E−00 | 6.3232E−00 |
| 2.4 | 3.8352E−00 | 4.7415E−00 | 5.8540E−00 | 7.2268E−00 |
| 2.5 | 4.2865E−00 | 5.3346E−00 | 6.6320E−00 | 8.2464E−00 |
| 2.6 | 4.7822E−00 | 5.9917E−00 | 7.5017E−00 | 9.3963E−00 |
| 2.7 | 5.3262E−00 | 6.7194E−00 | 8.4735E−00 | 1.0692E+01 |
| 2.8 | 5.9232E−00 | 7.5250E−00 | 9.5588E−00 | 1.2153E+01 |
| 2.9 | 6.5780E−00 | 8.4165E−00 | 1.0770E+01 | 1.3798E+01 |
| 3.0 | 7.2958E−00 | 9.4025E−00 | 1.2122E+01 | 1.5651E+01 |
| 3.1 | 8.0825E−00 | 1.0492E+01 | 1.3631E+01 | 1.7736E+01 |
| 3.2 | 8.9443E−00 | 1.1698E+01 | 1.5314E+01 | 2.0082E+01 |
| 3.3 | 9.8883E−00 | 1.3030E+01 | 1.7190E+01 | 2.2722E+01 |
| 3.4 | 1.0921E+01 | 1.4501E+01 | 1.9281E+01 | 2.5690E+01 |
| 3.5 | 1.2053E+01 | 1.6126E+01 | 2.1611E+01 | 2.9026E+01 |
| 3.6 | 1.3291E+01 | 1.7920E+01 | 2.4206E+01 | 3.2775E+01 |
| 3.7 | 1.4645E+01 | 1.9901E+01 | 2.7097E+01 | 3.6988E+01 |
| 3.8 | 1.6127E+01 | 2.2086E+01 | 3.0315E+01 | 4.1721E+01 |
| 3.9 | 1.7747E+01 | 2.4498E+01 | 3.3897E+01 | 4.7035E+01 |
| 4.0 | 1.9518E+01 | 2.7158E+01 | 3.7884E+01 | 5.3001E+01 |
| 4.1 | 2.1455E+01 | 3.0092E+01 | 4.2320E+01 | 5.9699E+01 |
| 4.2 | 2.3571E+01 | 3.3327E+01 | 4.7255E+01 | 6.7214E+01 |
| 4.3 | 2.5883E+01 | 3.6893E+01 | 5.2743E+01 | 7.5647E+01 |
| 4.4 | 2.8409E+01 | 4.0824E+01 | 5.8846E+01 | 8.5107E+01 |
| 4.5 | 3.1168E+01 | 4.5155E+01 | 6.5631E+01 | 9.5716E+01 |
| 4.6 | 3.4182E+01 | 4.9928E+01 | 7.3172E+01 | 1.0761E+02 |
| 4.7 | 3.7472E+01 | 5.5185E+01 | 8.1553E+01 | 1.2095E+02 |
| 4.8 | 4.1064E+01 | 6.0976E+01 | 9.0866E+01 | 1.3590E+02 |
| 4.9 | 4.4985E+01 | 6.7353E+01 | 1.0121E+02 | 1.5265E+02 |
| 5.0 | 4.9264E+01 | 7.4374E+01 | 1.1270E+02 | 1.7143E+02 |

$$dP_{-\frac{1}{2}+ib}(\cos\theta)/d\theta$$

| b | θ 60 | 65 | 70 | 75 |
|---|---|---|---|---|
| .0 | 1.4933E-01 | 1.6575E-01 | 1.8333E-01 | 2.0226E-01 |
| .1 | 1.5551E-01 | 1.7265E-01 | 1.9101E-01 | 2.1079E-01 |
| .2 | 1.7416E-01 | 1.9349E-01 | 2.1422E-01 | 2.3660E-01 |
| .3 | 2.0558E-01 | 2.2865E-01 | 2.5346E-01 | 2.8031E-01 |
| .4 | 2.5025E-01 | 2.7878E-01 | 3.0957E-01 | 3.4298E-01 |
| .5 | 3.0889E-01 | 3.4481E-01 | 3.8373E-01 | 4.2614E-01 |
| .6 | 3.8243E-01 | 4.2796E-01 | 4.7752E-01 | 5.3179E-01 |
| .7 | 4.7202E-01 | 5.2975E-01 | 5.9293E-01 | 6.6247E-01 |
| .8 | 5.7907E-01 | 6.5203E-01 | 7.3236E-01 | 8.2130E-01 |
| .9 | 7.0524E-01 | 7.9702E-01 | 8.9873E-01 | 1.0120E-00 |
| 1.0 | 8.5249E-01 | 9.6735E-01 | 1.0954E-00 | 1.2392E-00 |
| 1.1 | 1.0230E-00 | 1.1660E-00 | 1.3266E-00 | 1.5081E-00 |
| 1.2 | 1.2196E-00 | 1.3967E-00 | 1.5970E-00 | 1.8250E-00 |
| 1.3 | 1.4452E-00 | 1.6633E-00 | 1.9121E-00 | 2.1972E-00 |
| 1.4 | 1.7031E-00 | 1.9707E-00 | 2.2781E-00 | 2.6332E-00 |
| 1.5 | 1.9973E-00 | 2.3241E-00 | 2.7025E-00 | 3.1430E-00 |
| 1.6 | 2.3321E-00 | 2.7297E-00 | 3.1937E-00 | 3.7379E-00 |
| 1.7 | 2.7126E-00 | 3.1944E-00 | 3.7613E-00 | 4.4314E-00 |
| 1.8 | 3.1443E-00 | 3.7263E-00 | 4.4166E-00 | 5.2389E-00 |
| 1.9 | 3.6336E-00 | 4.3344E-00 | 5.1721E-00 | 6.1781E-00 |
| 2.0 | 4.1877E-00 | 5.0289E-00 | 6.0426E-00 | 7.2696E-00 |
| 2.1 | 4.8144E-00 | 5.8214E-00 | 7.0448E-00 | 8.5373E-00 |
| 2.2 | 5.5229E-00 | 6.7252E-00 | 8.1977E-00 | 1.0008E+01 |
| 2.3 | 6.3232E-00 | 7.7552E-00 | 9.5233E-00 | 1.1714E+01 |
| 2.4 | 7.2268E-00 | 8.9284E-00 | 1.1046E+01 | 1.3693E+01 |
| 2.5 | 8.2464E-00 | 1.0264E+01 | 1.2795E+01 | 1.5984E+01 |
| 2.6 | 9.3963E-00 | 1.1783E+01 | 1.4803E+01 | 1.8638E+01 |
| 2.7 | 1.0692E+01 | 1.3512E+01 | 1.7107E+01 | 2.1710E+01 |
| 2.8 | 1.2153E+01 | 1.5476E+01 | 1.9750E+01 | 2.5265E+01 |
| 2.9 | 1.3798E+01 | 1.7709E+01 | 2.2779E+01 | 2.9375E+01 |
| 3.0 | 1.5651E+01 | 2.0246E+01 | 2.6251E+01 | 3.4127E+01 |
| 3.1 | 1.7736E+01 | 2.3126E+01 | 3.0228E+01 | 3.9619E+01 |
| 3.2 | 2.0082E+01 | 2.6396E+01 | 3.4783E+01 | 4.5964E+01 |
| 3.3 | 2.2722E+01 | 3.0106E+01 | 3.9997E+01 | 5.3290E+01 |
| 3.4 | 2.5690E+01 | 3.4315E+01 | 4.5964E+01 | 6.1749E+01 |
| 3.5 | 2.9026E+01 | 3.9088E+01 | 5.2790E+01 | 7.1511E+01 |
| 3.6 | 3.2775E+01 | 4.4501E+01 | 6.0599E+01 | 8.2775E+01 |
| 3.7 | 3.6988E+01 | 5.0635E+01 | 6.9527E+01 | 9.5768E+01 |
| 3.8 | 4.1721E+01 | 5.7587E+01 | 7.9734E+01 | 1.1075E+02 |
| 3.9 | 4.7035E+01 | 6.5462E+01 | 9.1398E+01 | 1.2802E+02 |
| 4.0 | 5.3001E+01 | 7.4382E+01 | 1.0472E+02 | 1.4793E+02 |
| 4.1 | 5.9699E+01 | 8.4483E+01 | 1.1994E+02 | 1.7087E+02 |
| 4.2 | 6.7214E+01 | 9.5918E+01 | 1.3733E+02 | 1.9730E+02 |
| 4.3 | 7.5647E+01 | 1.0886E+02 | 1.5718E+02 | 2.2774E+02 |
| 4.4 | 8.5107E+01 | 1.2350E+02 | 1.7985E+02 | 2.6279E+02 |
| 4.5 | 9.5716E+01 | 1.4007E+02 | 2.0571E+02 | 3.0315E+02 |
| 4.6 | 1.0761E+02 | 1.5882E+02 | 2.3523E+02 | 3.4961E+02 |
| 4.7 | 1.2095E+02 | 1.8002E+02 | 2.6890E+02 | 4.0308E+02 |
| 4.8 | 1.3590E+02 | 2.0399E+02 | 3.0731E+02 | 4.6460E+02 |
| 4.9 | 1.5265E+02 | 2.3110E+02 | 3.5112E+02 | 5.3538E+02 |
| 5.0 | 1.7143E+02 | 2.6174E+02 | 4.0107E+02 | 6.1680E+02 |

$$dP_{-\frac{1}{2}+ib}(\cos \theta)/d\theta$$

| b | θ 75 | 80 | 85 | 90 |
|---|---|---|---|---|
| .0 | 2.0226E−01 | 2.2277E−01 | 2.4513E−01 | 2.6967E−01 |
| .1 | 2.1079E−01 | 2.3224E−01 | 2.5562E−01 | 2.8130E−01 |
| .2 | 2.3660E−01 | 2.6089E−01 | 2.8742E−01 | 3.1658E−01 |
| .3 | 2.8031E−01 | 3.0951E−01 | 3.4149E−01 | 3.7673E−01 |
| .4 | 3.4298E−01 | 3.7945E−01 | 4.1951E−01 | 4.6379E−01 |
| .5 | 4.2614E−01 | 4.7262E−01 | 5.2387E−01 | 5.8074E−01 |
| .6 | 5.3179E−01 | 5.9155E−01 | 6.5775E−01 | 7.3154E−01 |
| .7 | 6.6247E−01 | 7.3947E−01 | 8.2521E−01 | 9.2127E−01 |
| .8 | 8.2130E−01 | 9.2036E−01 | 1.0312E−00 | 1.1562E−00 |
| .9 | 1.0120E−00 | 1.1390E−00 | 1.2821E−00 | 1.4443E−00 |
| 1.0 | 1.2392E−00 | 1.4013E−00 | 1.5852E−00 | 1.7950E−00 |
| 1.1 | 1.5081E−00 | 1.7142E−00 | 1.9495E−00 | 2.2196E−00 |
| 1.2 | 1.8250E−00 | 2.0858E−00 | 2.3856E−00 | 2.7321E−00 |
| 1.3 | 2.1972E−00 | 2.5257E−00 | 2.9061E−00 | 3.3489E−00 |
| 1.4 | 2.6332E−00 | 3.0454E−00 | 3.5261E−00 | 4.0895E−00 |
| 1.5 | 3.1430E−00 | 3.6580E−00 | 4.2632E−00 | 4.9776E−00 |
| 1.6 | 3.7379E−00 | 4.3792E−00 | 5.1383E−00 | 6.0410E−00 |
| 1.7 | 4.4314E−00 | 5.2270E−00 | 6.1759E−00 | 7.3127E−00 |
| 1.8 | 5.2389E−00 | 6.2228E−00 | 7.4051E−00 | 8.8323E−00 |
| 1.9 | 6.1781E−00 | 7.3911E−00 | 8.8599E−00 | 1.0646E+01 |
| 2.0 | 7.2696E−00 | 8.7608E−00 | 1.0580E+01 | 1.2810E+01 |
| 2.1 | 8.5373E−00 | 1.0365E+01 | 1.2613E+01 | 1.5389E+01 |
| 2.2 | 1.0008E+01 | 1.2244E+01 | 1.5014E+01 | 1.8462E+01 |
| 2.3 | 1.1714E+01 | 1.4442E+01 | 1.7848E+01 | 2.2120E+01 |
| 2.4 | 1.3693E+01 | 1.7012E+01 | 2.1191E+01 | 2.6473E+01 |
| 2.5 | 1.5984E+01 | 2.0016E+01 | 2.5132E+01 | 3.1650E+01 |
| 2.6 | 1.8638E+01 | 2.3526E+01 | 2.9777E+01 | 3.7804E+01 |
| 2.7 | 2.1710E+01 | 2.7624E+01 | 3.5248E+01 | 4.5115E+01 |
| 2.8 | 2.5265E+01 | 3.2406E+01 | 4.1688E+01 | 5.3798E+01 |
| 2.9 | 2.9375E+01 | 3.7986E+01 | 4.9268E+01 | 6.4105E+01 |
| 3.0 | 3.4127E+01 | 4.4494E+01 | 5.8185E+01 | 7.6336E+01 |
| 3.1 | 3.9619E+01 | 5.2080E+01 | 6.8671E+01 | 9.0845E+01 |
| 3.2 | 4.5964E+01 | 6.0920E+01 | 8.0998E+01 | 1.0804E+02 |
| 3.3 | 5.3290E+01 | 7.1219E+01 | 9.5483E+01 | 1.2844E+02 |
| 3.4 | 6.1749E+01 | 8.3213E+01 | 1.1250E+02 | 1.5260E+02 |
| 3.5 | 7.1511E+01 | 9.7177E+01 | 1.3248E+02 | 1.8123E+02 |
| 3.6 | 8.2775E+01 | 1.1342E+02 | 1.5594E+02 | 2.1513E+02 |
| 3.7 | 9.5768E+01 | 1.3234E+02 | 1.8348E+02 | 2.5527E+02 |
| 3.8 | 1.1075E+02 | 1.5433E+02 | 2.1580E+02 | 3.0278E+02 |
| 3.9 | 1.2802E+02 | 1.7992E+02 | 2.5370E+02 | 3.5900E+02 |
| 4.0 | 1.4793E+02 | 2.0966E+02 | 2.9816E+02 | 4.2551E+02 |
| 4.1 | 1.7087E+02 | 2.4423E+02 | 3.5029E+02 | 5.0418E+02 |
| 4.2 | 1.9730E+02 | 2.8441E+02 | 4.1140E+02 | 5.9720E+02 |
| 4.3 | 2.2774E+02 | 3.3109E+02 | 4.8303E+02 | 7.0717E+02 |
| 4.4 | 2.6279E+02 | 3.8532E+02 | 5.6695E+02 | 8.3716E+02 |
| 4.5 | 3.0315E+02 | 4.4830E+02 | 6.6527E+02 | 9.9077E+02 |
| 4.6 | 3.4961E+02 | 5.2143E+02 | 7.8044E+02 | 1.1722E+03 |
| 4.7 | 4.0308E+02 | 6.0633E+02 | 9.1530E+02 | 1.3866E+03 |
| 4.8 | 4.6460E+02 | 7.0488E+02 | 1.0732E+03 | 1.6399E+03 |
| 4.9 | 5.3538E+02 | 8.1925E+02 | 1.2580E+03 | 1.9389E+03 |
| 5.0 | 6.1680E+02 | 9.5195E+02 | 1.4744E+03 | 2.2920E+03 |

$$dP_{-\frac{1}{2}+ib}(\cos\theta)/d\theta$$

| $\theta$ / b | 90 | 95 | 100 | 105 |
|---|---|---|---|---|
| .0 | 2.6967E-01 | 2.9678E-01 | 3.2697E-01 | 3.6085E-01 |
| .1 | 2.8130E-01 | 3.0968E-01 | 3.4129E-01 | 3.7679E-01 |
| .2 | 3.1658E-01 | 3.4886E-01 | 3.8487E-01 | 4.2535E-01 |
| .3 | 3.7673E-01 | 4.1582E-01 | 4.5951E-01 | 5.0873E-01 |
| .4 | 4.6379E-01 | 5.1307E-01 | 5.6830E-01 | 6.3070E-01 |
| .5 | 5.8074E-01 | 6.4427E-01 | 7.1573E-01 | 7.9675E-01 |
| .6 | 7.3155E-01 | 8.1434E-01 | 9.0787E-01 | 1.0143E-00 |
| .7 | 9.2127E-01 | 1.0295E-00 | 1.1525E-00 | 1.2931E-00 |
| .8 | 1.1562E-00 | 1.2979E-00 | 1.4596E-00 | 1.6453E-00 |
| .9 | 1.4443E-00 | 1.6292E-00 | 1.8414E-00 | 2.0866E-00 |
| 1.0 | 1.7950E-00 | 2.0355E-00 | 2.3132E-00 | 2.6359E-00 |
| 1.1 | 2.2196E-00 | 2.5315E-00 | 2.8937E-00 | 3.3170E-00 |
| 1.2 | 2.7321E-00 | 3.1348E-00 | 3.6054E-00 | 4.1590E-00 |
| 1.3 | 3.3489E-00 | 3.8668E-00 | 4.4762E-00 | 5.1976E-00 |
| 1.4 | 4.0896E-00 | 4.7533E-00 | 5.5396E-00 | 6.4764E-00 |
| 1.5 | 4.9776E-00 | 5.8252E-00 | 6.8362E-00 | 8.0489E-00 |
| 1.6 | 6.0410E-00 | 7.1196E-00 | 8.4153E-00 | 9.9802E-00 |
| 1.7 | 7.3127E-00 | 8.6811E-00 | 1.0336E+01 | 1.2349E+01 |
| 1.8 | 8.8323E-00 | 1.0562E+01 | 1.2671E+01 | 1.5254E+01 |
| 1.9 | 1.0646E+01 | 1.2828E+01 | 1.5507E+01 | 1.8812E+01 |
| 2.0 | 1.2810E+01 | 1.5554E+01 | 1.8948E+01 | 2.3166E+01 |
| 2.1 | 1.5389E+01 | 1.8832E+01 | 2.3121E+01 | 2.8493E+01 |
| 2.2 | 1.8462E+01 | 2.2771E+01 | 2.8180E+01 | 3.5004E+01 |
| 2.3 | 2.2120E+01 | 2.7500E+01 | 3.4306E+01 | 4.2958E+01 |
| 2.4 | 2.6473E+01 | 3.3177E+01 | 4.1723E+01 | 5.2670E+01 |
| 2.5 | 3.1650E+01 | 3.9987E+01 | 5.0697E+01 | 6.4522E+01 |
| 2.6 | 3.7804E+01 | 4.8152E+01 | 6.1550E+01 | 7.8980E+01 |
| 2.7 | 4.5115E+01 | 5.7936E+01 | 7.4669E+01 | 9.6607E+01 |
| 2.8 | 5.3798E+01 | 6.9658E+01 | 9.0520E+01 | 1.1809E+02 |
| 2.9 | 6.4105E+01 | 8.3694E+01 | 1.0966E+02 | 1.4426E+02 |
| 3.0 | 7.6337E+01 | 1.0049E+02 | 1.3278E+02 | 1.7612E+02 |
| 3.1 | 9.0845E+01 | 1.2059E+02 | 1.6067E+02 | 2.1492E+02 |
| 3.2 | 1.0804E+02 | 1.4463E+02 | 1.9433E+02 | 2.6213E+02 |
| 3.3 | 1.2844E+02 | 1.7338E+02 | 2.3492E+02 | 3.1956E+02 |
| 3.4 | 1.5260E+02 | 2.0774E+02 | 2.8385E+02 | 3.8940E+02 |
| 3.5 | 1.8123E+02 | 2.4880E+02 | 3.4284E+02 | 4.7430E+02 |
| 3.6 | 2.1513E+02 | 2.9785E+02 | 4.1391E+02 | 5.7750E+02 |
| 3.7 | 2.5527E+02 | 3.5642E+02 | 4.9953E+02 | 7.0288E+02 |
| 3.8 | 3.0278E+02 | 4.2636E+02 | 6.0263E+02 | 8.5520E+02 |
| 3.9 | 3.5900E+02 | 5.0984E+02 | 7.2678E+02 | 1.0401E+03 |
| 4.0 | 4.2551E+02 | 6.0945E+02 | 8.7621E+02 | 1.2647E+03 |
| 4.1 | 5.0418E+02 | 7.2830E+02 | 1.0560E+03 | 1.5374E+03 |
| 4.2 | 5.9720E+02 | 8.7006E+02 | 1.2724E+03 | 1.8682E+03 |
| 4.3 | 7.0717E+02 | 1.0391E+03 | 1.5326E+03 | 2.2697E+03 |
| 4.4 | 8.3716E+02 | 1.2406E+03 | 1.8456E+03 | 2.7567E+03 |
| 4.5 | 9.9077E+02 | 1.4809E+03 | 2.2220E+03 | 3.3474E+03 |
| 4.6 | 1.1722E+03 | 1.7673E+03 | 2.6745E+03 | 4.0637E+03 |
| 4.7 | 1.3866E+03 | 2.1085E+03 | 3.2183E+03 | 4.9322E+03 |
| 4.8 | 1.6399E+03 | 2.5150E+03 | 3.8720E+03 | 5.9850E+03 |
| 4.9 | 1.9389E+03 | 2.9993E+03 | 4.6573E+03 | 7.2610E+03 |
| 5.0 | 2.2920E+03 | 3.5760E+03 | 5.6008E+03 | 8.8074E+03 |

$$dP_{-\frac{1}{2}+ib}(\cos \theta)/d\theta$$

| $\theta$ b | 105 | 110 | 115 | 120 |
|---|---|---|---|---|
| .0 | 3.6085E−01 | 3.9922E−01 | 4.4312E−01 | 4.9393E−01 |
| .1 | 3.7679E−01 | 4.1701E−01 | 4.6305E−01 | 5.1634E−01 |
| .2 | 4.2535E−01 | 4.7127E−01 | 5.2389E−01 | 5.8486E−01 |
| .3 | 5.0873E−01 | 5.6467E−01 | 6.2889E−01 | 7.0343E−01 |
| .4 | 6.3070E−01 | 7.0180E−01 | 7.8362E−01 | 8.7881E−01 |
| .5 | 7.9675E−01 | 8.8937E−01 | 9.9628E−01 | 1.1210E−00 |
| .6 | 1.0143E−00 | 1.1365E−00 | 1.2780E−00 | 1.4436E−00 |
| .7 | 1.2931E−00 | 1.4551E−00 | 1.6435E−00 | 1.8649E−00 |
| .8 | 1.6453E−00 | 1.8605E−00 | 2.1118E−00 | 2.4084E−00 |
| .9 | 2.0866E−00 | 2.3719E−00 | 2.7069E−00 | 3.1040E−00 |
| 1.0 | 2.6359E−00 | 3.0135E−00 | 3.4592E−00 | 3.9901E−00 |
| 1.1 | 3.3170E−00 | 3.8153E−00 | 4.4067E−00 | 5.1148E−00 |
| 1.2 | 4.1590E−00 | 4.8145E−00 | 5.5969E−00 | 6.5390E−00 |
| 1.3 | 5.1976E−00 | 6.0571E−00 | 7.0892E−00 | 8.3391E−00 |
| 1.4 | 6.4764E−00 | 7.5999E−00 | 8.9573E−00 | 1.0611E+01 |
| 1.5 | 8.0489E−00 | 9.5128E−00 | 1.1292E+01 | 1.3474E+01 |
| 1.6 | 9.9802E−00 | 1.1882E+01 | 1.4209E+01 | 1.7081E+01 |
| 1.7 | 1.2349E+01 | 1.4813E+01 | 1.7849E+01 | 2.1619E+01 |
| 1.8 | 1.5254E+01 | 1.8437E+01 | 2.2386E+01 | 2.7324E+01 |
| 1.9 | 1.8812E+01 | 2.2914E+01 | 2.8039E+01 | 3.4490E+01 |
| 2.0 | 2.3166E+01 | 2.8440E+01 | 3.5075E+01 | 4.3487E+01 |
| 2.1 | 2.8493E+01 | 3.5257E+01 | 4.3830E+01 | 5.4774E+01 |
| 2.2 | 3.5004E+01 | 4.3661E+01 | 5.4714E+01 | 6.8927E+01 |
| 2.3 | 4.2958E+01 | 5.4017E+01 | 6.8240E+01 | 8.6664E+01 |
| 2.4 | 5.2670E+01 | 6.6769E+01 | 8.5039E+01 | 1.0888E+02 |
| 2.5 | 6.4522E+01 | 8.2465E+01 | 1.0589E+02 | 1.3669E+02 |
| 2.6 | 7.8980E+01 | 1.0177E+02 | 1.3176E+02 | 1.7150E+02 |
| 2.7 | 9.6607E+01 | 1.2552E+02 | 1.6386E+02 | 2.1503E+02 |
| 2.8 | 1.1809E+02 | 1.5471E+02 | 2.0364E+02 | 2.6947E+02 |
| 2.9 | 1.4426E+02 | 1.9057E+02 | 2.5295E+02 | 3.3751E+02 |
| 3.0 | 1.7612E+02 | 2.3463E+02 | 3.1403E+02 | 4.2252E+02 |
| 3.1 | 2.1492E+02 | 2.8871E+02 | 3.8967E+02 | 5.2870E+02 |
| 3.2 | 2.6213E+02 | 3.5510E+02 | 4.8332E+02 | 6.6128E+02 |
| 3.3 | 3.1956E+02 | 4.3656E+02 | 5.9920E+02 | 8.2676E+02 |
| 3.4 | 3.8940E+02 | 5.3647E+02 | 7.4258E+02 | 1.0332E+03 |
| 3.5 | 4.7430E+02 | 6.5899E+02 | 9.1991E+02 | 1.2908E+03 |
| 3.6 | 5.7750E+02 | 8.0920E+02 | 1.1391E+03 | 1.6121E+03 |
| 3.7 | 7.0288E+02 | 9.9328E+02 | 1.4102E+03 | 2.0126E+03 |
| 3.8 | 8.5520E+02 | 1.2188E+03 | 1.7452E+03 | 2.5119E+03 |
| 3.9 | 1.0401E+03 | 1.4951E+03 | 2.1591E+03 | 3.1342E+03 |
| 4.0 | 1.2647E+03 | 1.8335E+03 | 2.6704E+03 | 3.9095E+03 |
| 4.1 | 1.5374E+03 | 2.2478E+03 | 3.3018E+03 | 4.8753E+03 |
| 4.2 | 1.8682E+03 | 2.7549E+03 | 4.0815E+03 | 6.0781E+03 |
| 4.3 | 2.2697E+03 | 3.3757E+03 | 5.0440E+03 | 7.5758E+03 |
| 4.4 | 2.7567E+03 | 4.1352E+03 | 6.2320E+03 | 9.4404E+03 |
| 4.5 | 3.3474E+03 | 5.0644E+03 | 7.6980E+03 | 1.1761E+04 |
| 4.6 | 4.0637E+03 | 6.2011E+03 | 9.5067E+03 | 1.4649E+04 |
| 4.7 | 4.9322E+03 | 7.5912E+03 | 1.1738E+04 | 1.8243E+04 |
| 4.8 | 5.9850E+03 | 9.2909E+03 | 1.4490E+04 | 2.2714E+04 |
| 4.9 | 7.2610E+03 | 1.1369E+04 | 1.7883E+04 | 2.8276E+04 |
| 5.0 | 8.8074E+03 | 1.3909E+04 | 2.2068E+04 | 3.5192E+04 |

$$dP_{-\frac{1}{2}+ib}(\cos\theta)/d\theta$$

| b | θ 120 | 125 | 130 | 135 |
|---|---|---|---|---|
| .0 | 4.9393E-01 | 5.5352E-01 | 6.2450E-01 | 7.1061E-01 |
| .1 | 5.1634E-01 | 5.7887E-01 | 6.5336E-01 | 7.4375E-01 |
| .2 | 5.8486E-01 | 6.5646E-01 | 7.4183E-01 | 8.4550E-01 |
| .3 | 7.0343E-01 | 7.9108E-01 | 8.9573E-01 | 1.0229E-00 |
| .4 | 8.7881E-01 | 9.9097E-01 | 1.1251E-00 | 1.2884E-00 |
| .5 | 1.1210E-00 | 1.2683E-00 | 1.4449E-00 | 1.6603E-00 |
| .6 | 1.4436E-00 | 1.6399E-00 | 1.8758E-00 | 2.1643E-00 |
| .7 | 1.8649E-00 | 2.1282E-00 | 2.4457E-00 | 2.8349E-00 |
| .8 | 2.4084E-00 | 2.7624E-00 | 3.1908E-00 | 3.7177E-00 |
| .9 | 3.1040E-00 | 3.5801E-00 | 4.1584E-00 | 4.8724E-00 |
| 1.0 | 3.9901E-00 | 4.6294E-00 | 5.4095E-00 | 6.3764E-00 |
| 1.1 | 5.1148E-00 | 5.9718E-00 | 7.0223E-00 | 8.3299E-00 |
| 1.2 | 6.5390E-00 | 7.6852E-00 | 9.0970E-00 | 1.0862E+01 |
| 1.3 | 8.3391E-00 | 9.8682E-00 | 1.1761E+01 | 1.4140E+01 |
| 1.4 | 1.0611E+01 | 1.2645E+01 | 1.5179E+01 | 1.8378E+01 |
| 1.5 | 1.3474E+01 | 1.6176E+01 | 1.9558E+01 | 2.3853E+01 |
| 1.6 | 1.7081E+01 | 2.0658E+01 | 2.5163E+01 | 3.0917E+01 |
| 1.7 | 2.1619E+01 | 2.6344E+01 | 3.2333E+01 | 4.0026E+01 |
| 1.8 | 2.7324E+01 | 3.3553E+01 | 4.1497E+01 | 5.1764E+01 |
| 1.9 | 3.4490E+01 | 4.2684E+01 | 5.3202E+01 | 6.6881E+01 |
| 2.0 | 4.3487E+01 | 5.4243E+01 | 6.8143E+01 | 8.6335E+01 |
| 2.1 | 5.4774E+01 | 6.8868E+01 | 8.7203E+01 | 1.1136E+02 |
| 2.2 | 6.8927E+01 | 8.7360E+01 | 1.1150E+02 | 1.4353E+02 |
| 2.3 | 8.6664E+01 | 1.1073E+02 | 1.4247E+02 | 1.8487E+02 |
| 2.4 | 1.0888E+02 | 1.4025E+02 | 1.8193E+02 | 2.3798E+02 |
| 2.5 | 1.3669E+02 | 1.7752E+02 | 2.3216E+02 | 3.0616E+02 |
| 2.6 | 1.7150E+02 | 2.2455E+02 | 2.9609E+02 | 3.9366E+02 |
| 2.7 | 2.1503E+02 | 2.8389E+02 | 3.7742E+02 | 5.0592E+02 |
| 2.8 | 2.6947E+02 | 3.5872E+02 | 4.8084E+02 | 6.4988E+02 |
| 2.9 | 3.3751E+02 | 4.5304E+02 | 6.1233E+02 | 8.3444E+02 |
| 3.0 | 4.2252E+02 | 5.7189E+02 | 7.7942E+02 | 1.0709E+03 |
| 3.1 | 5.2870E+02 | 7.2161E+02 | 9.9169E+02 | 1.3740E+03 |
| 3.2 | 6.6128E+02 | 9.1014E+02 | 1.2612E+03 | 1.7621E+03 |
| 3.3 | 8.2676E+02 | 1.1474E+03 | 1.6035E+03 | 2.2591E+03 |
| 3.4 | 1.0332E+03 | 1.4462E+03 | 2.0380E+03 | 2.8953E+03 |
| 3.5 | 1.2908E+03 | 1.8220E+03 | 2.5894E+03 | 3.7095E+03 |
| 3.6 | 1.6121E+03 | 2.2948E+03 | 3.2888E+03 | 4.7513E+03 |
| 3.7 | 2.0126E+03 | 2.8893E+03 | 4.1760E+03 | 6.0840E+03 |
| 3.8 | 2.5119E+03 | 3.6368E+03 | 5.3009E+03 | 7.7883E+03 |
| 3.9 | 3.1342E+03 | 4.5763E+03 | 6.7271E+03 | 9.9675E+03 |
| 4.0 | 3.9095E+03 | 5.7571E+03 | 8.5348E+03 | 1.2753E+04 |
| 4.1 | 4.8753E+03 | 7.2406E+03 | 1.0825E+04 | 1.6313E+04 |
| 4.2 | 6.0781E+03 | 9.1041E+03 | 1.3728E+04 | 2.0863E+04 |
| 4.3 | 7.5758E+03 | 1.1444E+04 | 1.7404E+04 | 2.6677E+04 |
| 4.4 | 9.4404E+03 | 1.4383E+04 | 2.2061E+04 | 3.4103E+04 |
| 4.5 | 1.1761E+04 | 1.8073E+04 | 2.7958E+04 | 4.3587E+04 |
| 4.6 | 1.4649E+04 | 2.2705E+04 | 3.5424E+04 | 5.5699E+04 |
| 4.7 | 1.8243E+04 | 2.8518E+04 | 4.4874E+04 | 7.1163E+04 |
| 4.8 | 2.2714E+04 | 3.5812E+04 | 5.6836E+04 | 9.0905E+04 |
| 4.9 | 2.8276E+04 | 4.4964E+04 | 7.1974E+04 | 1.1610E+05 |
| 5.0 | 3.5192E+04 | 5.6445E+04 | 9.1129E+04 | 1.4826E+05 |

$$\frac{dP_{-\frac{1}{2}+ib}(\cos\theta)}{d\theta}$$

| $\theta$ b | 135 | 140 | 145 | 150 |
|---|---|---|---|---|
| .0 | 7.1061E-01 | 8.1748E-01 | 9.5388E-01 | 1.1344E-00 |
| .1 | 7.4375E-01 | 8.5595E-01 | 9.9918E-01 | 1.1887E-00 |
| .2 | 8.4550E-01 | 9.7423E-01 | 1.1386E-00 | 1.3563E-00 |
| .3 | 1.0229E-00 | 1.1810E-00 | 1.3831E-00 | 1.6508E-00 |
| .4 | 1.2884E-00 | 1.4917E-00 | 1.7517E-00 | 2.0963E-00 |
| .5 | 1.6603E-00 | 1.9289E-00 | 2.2729E-00 | 2.7293E-00 |
| .6 | 2.1643E-00 | 2.5247E-00 | 2.9870E-00 | 3.6010E-00 |
| .7 | 2.8349E-00 | 3.3223E-00 | 3.9488E-00 | 4.7822E-00 |
| .8 | 3.7177E-00 | 4.3794E-00 | 5.2318E-00 | 6.3677E-00 |
| .9 | 4.8724E-00 | 5.7716E-00 | 6.9332E-00 | 8.4846E-00 |
| 1.0 | 6.3764E-00 | 7.5983E-00 | 9.1817E-00 | 1.1301E+01 |
| 1.1 | 8.3299E-00 | 9.9889E-00 | 1.2145E+01 | 1.5041E+01 |
| 1.2 | 1.0862E+01 | 1.3111E+01 | 1.6046E+01 | 2.0000E+01 |
| 1.3 | 1.4140E+01 | 1.7185E+01 | 2.1174E+01 | 2.6566E+01 |
| 1.4 | 1.8378E+01 | 2.2493E+01 | 2.7907E+01 | 3.5253E+01 |
| 1.5 | 2.3853E+01 | 2.9403E+01 | 3.6741E+01 | 4.6738E+01 |
| 1.6 | 3.0917E+01 | 3.8392E+01 | 4.8323E+01 | 6.1912E+01 |
| 1.7 | 4.0026E+01 | 5.0077E+01 | 6.3498E+01 | 8.1947E+01 |
| 1.8 | 5.1764E+01 | 6.5256E+01 | 8.3368E+01 | 1.0838E+02 |
| 1.9 | 6.6881E+01 | 8.4962E+01 | 1.0937E+02 | 1.4326E+02 |
| 2.0 | 8.6335E+01 | 1.1053E+02 | 1.4338E+02 | 1.8924E+02 |
| 2.1 | 1.1136E+02 | 1.4369E+02 | 1.8785E+02 | 2.4983E+02 |
| 2.2 | 1.4353E+02 | 1.8667E+02 | 2.4596E+02 | 3.2965E+02 |
| 2.3 | 1.8487E+02 | 2.4236E+02 | 3.2187E+02 | 4.3477E+02 |
| 2.4 | 2.3798E+02 | 3.1449E+02 | 4.2099E+02 | 5.7313E+02 |
| 2.5 | 3.0616E+02 | 4.0787E+02 | 5.5037E+02 | 7.5519E+02 |
| 2.6 | 3.9366E+02 | 5.2871E+02 | 7.1918E+02 | 9.9469E+02 |
| 2.7 | 5.0592E+02 | 6.8503E+02 | 9.3937E+02 | 1.3096E+03 |
| 2.8 | 6.4988E+02 | 8.8718E+02 | 1.2264E+03 | 1.7237E+03 |
| 2.9 | 8.3444E+02 | 1.1485E+03 | 1.6007E+03 | 2.2679E+03 |
| 3.0 | 1.0709E+03 | 1.4862E+03 | 2.0885E+03 | 2.9829E+03 |
| 3.1 | 1.3740E+03 | 1.9226E+03 | 2.7239E+03 | 3.9222E+03 |
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| 3.8 | 7.7883E+03 | 1.1553E+04 | 1.7347E+04 | 2.6458E+04 |
| 3.9 | 9.9675E+03 | 1.4911E+04 | 2.2576E+04 | 3.4721E+04 |
| 4.0 | 1.2753E+04 | 1.9240E+04 | 2.9375E+04 | 4.5555E+04 |
| 4.1 | 1.6313E+04 | 2.4820E+04 | 3.8214E+04 | 5.9759E+04 |
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| 4.4 | 3.4103E+04 | 5.3218E+04 | 8.4034E+04 | 1.3474E+05 |
| 4.5 | 4.3587E+04 | 6.8598E+04 | 1.0923E+05 | 1.7663E+05 |
| 4.6 | 5.5699E+04 | 8.8406E+04 | 1.4197E+05 | 2.3151E+05 |
| 4.7 | 7.1163E+04 | 1.1391E+05 | 1.8449E+05 | 3.0338E+05 |
| 4.8 | 9.0905E+04 | 1.4675E+05 | 2.3971E+05 | 3.9752E+05 |
| 4.9 | 1.1610E+05 | 1.8904E+05 | 3.1140E+05 | 5.2078E+05 |
| 5.0 | 1.4826E+05 | 2.4347E+05 | 4.0448E+05 | 6.8218E+05 |

$$dP_{-\frac{1}{2}+ib}(\cos \theta)/d\theta$$

| b | θ 150 | 155 | 160 | 165 |
|---|-------|-----|-----|-----|
| .0 | 1.1344E-00 | 1.3853E-00 | 1.7590E-00 | 2.3774E-00 |
| .1 | 1.1887E-00 | 1.4523E-00 | 1.8447E-00 | 2.4940E-00 |
| .2 | 1.3563E-00 | 1.6589E-00 | 2.1095E-00 | 2.8549E-00 |
| .3 | 1.6508E-00 | 2.0229E-00 | 2.5771E-00 | 3.4937E-00 |
| .4 | 2.0963E-00 | 2.5756E-00 | 3.2894E-00 | 4.4696E-00 |
| .5 | 2.7293E-00 | 3.3643E-00 | 4.3100E-00 | 5.8734E-00 |
| .6 | 3.6010E-00 | 4.4561E-00 | 5.7298E-00 | 7.8349E-00 |
| .7 | 4.7822E-00 | 5.9438E-00 | 7.6749E-00 | 1.0535E+01 |
| .8 | 6.3677E-00 | 7.9531E-00 | 1.0317E+01 | 1.4223E+01 |
| .9 | 8.4846E-00 | 1.0653E+01 | 1.3889E+01 | 1.9238E+01 |
| 1.0 | 1.1301E+01 | 1.4270E+01 | 1.8705E+01 | 2.6040E+01 |
| 1.1 | 1.5041E+01 | 1.9105E+01 | 2.5187E+01 | 3.5249E+01 |
| 1.2 | 2.0000E+01 | 2.5562E+01 | 3.3900E+01 | 4.7708E+01 |
| 1.3 | 2.6566E+01 | 3.4173E+01 | 4.5601E+01 | 6.4548E+01 |
| 1.4 | 3.5253E+01 | 4.5650E+01 | 6.1306E+01 | 8.7299E+01 |
| 1.5 | 4.6738E+01 | 6.0936E+01 | 8.2372E+01 | 1.1802E+02 |
| 1.6 | 6.1912E+01 | 8.1283E+01 | 1.1061E+02 | 1.5949E+02 |
| 1.7 | 8.1947E+01 | 1.0835E+02 | 1.4846E+02 | 2.1546E+02 |
| 1.8 | 1.0838E+02 | 1.4435E+02 | 1.9917E+02 | 2.9096E+02 |
| 1.9 | 1.4326E+02 | 1.9219E+02 | 2.6707E+02 | 3.9279E+02 |
| 2.0 | 1.8924E+02 | 2.5577E+02 | 3.5797E+02 | 5.3008E+02 |
| 2.1 | 2.4983E+02 | 3.4021E+02 | 4.7962E+02 | 7.1515E+02 |
| 2.2 | 3.2965E+02 | 4.5231E+02 | 6.4237E+02 | 9.6455E+02 |
| 2.3 | 4.3477E+02 | 6.0110E+02 | 8.6004E+02 | 1.3005E+03 |
| 2.4 | 5.7313E+02 | 7.9852E+02 | 1.1510E+03 | 1.7532E+03 |
| 2.5 | 7.5519E+02 | 1.0603E+03 | 1.5401E+03 | 2.3628E+03 |
| 2.6 | 9.9469E+02 | 1.4076E+03 | 2.0600E+03 | 3.1836E+03 |
| 2.7 | 1.3096E+03 | 1.8679E+03 | 2.7547E+03 | 4.2886E+03 |
| 2.8 | 1.7237E+03 | 2.4779E+03 | 3.6827E+03 | 5.7760E+03 |
| 2.9 | 2.2679E+03 | 3.2862E+03 | 4.9220E+03 | 7.7776E+03 |
| 3.0 | 2.9829E+03 | 4.3569E+03 | 6.5767E+03 | 1.0470E+04 |
| 3.1 | 3.9222E+03 | 5.7750E+03 | 8.7857E+03 | 1.4094E+04 |
| 3.2 | 5.1558E+03 | 7.6525E+03 | 1.1734E+04 | 1.8967E+04 |
| 3.3 | 6.7756E+03 | 1.0138E+04 | 1.5668E+04 | 2.5522E+04 |
| 3.4 | 8.9018E+03 | 1.3427E+04 | 2.0918E+04 | 3.4336E+04 |
| 3.5 | 1.1692E+04 | 1.7780E+04 | 2.7921E+04 | 4.6187E+04 |
| 3.6 | 1.5353E+04 | 2.3540E+04 | 3.7262E+04 | 6.2119E+04 |
| 3.7 | 2.0157E+04 | 3.1158E+04 | 4.9719E+04 | 8.3534E+04 |
| 3.8 | 2.6458E+04 | 4.1234E+04 | 6.6328E+04 | 1.1231E+05 |
| 3.9 | 3.4721E+04 | 5.4557E+04 | 8.8472E+04 | 1.5099E+05 |
| 4.0 | 4.5555E+04 | 7.2173E+04 | 1.1799E+05 | 2.0296E+05 |
| 4.1 | 5.9759E+04 | 9.5460E+04 | 1.5733E+05 | 2.7279E+05 |
| 4.2 | 7.8377E+04 | 1.2624E+05 | 2.0976E+05 | 3.6659E+05 |
| 4.3 | 1.0277E+05 | 1.6691E+05 | 2.7962E+05 | 4.9259E+05 |
| 4.4 | 1.3474E+05 | 2.2066E+05 | 3.7269E+05 | 6.6182E+05 |
| 4.5 | 1.7663E+05 | 2.9167E+05 | 4.9669E+05 | 8.8909E+05 |
| 4.6 | 2.3151E+05 | 3.8548E+05 | 6.6185E+05 | 1.1942E+06 |
| 4.7 | 3.0339E+05 | 5.0939E+05 | 8.8182E+05 | 1.6040E+06 |
| 4.8 | 3.9752E+05 | 6.7304E+05 | 1.1747E+06 | 2.1542E+06 |
| 4.9 | 5.2079E+05 | 8.8915E+05 | 1.5648E+06 | 2.8927E+06 |
| 5.0 | 6.8219E+05 | 1.1744E+06 | 2.0841E+06 | 3.8842E+06 |

$$\frac{dP_{-\frac{1}{2}+ib}(\cos\theta)}{d\theta}$$

| b | θ  165 | 170 | 175 | 180 |
|---|---|---|---|---|
| .0 | 2.3774E-00 | 3.6058E-00 | 7.2695E-00 | ∞ |
| .1 | 2.4940E-00 | 3.7839E-00 | 7.6303E-00 | ∞ |
| .2 | 2.8549E-00 | 4.3354E-00 | 8.7484E-00 | ∞ |
| .3 | 3.4937E-00 | 5.3131E-00 | 1.0733E+01 | ∞ |
| .4 | 4.4696E-00 | 6.8111E-00 | 1.3781E+01 | ∞ |
| .5 | 5.8734E-00 | 8.9728E-00 | 1.8191E+01 | ∞ |
| .6 | 7.8349E-00 | 1.2005E+01 | 2.4396E+01 | ∞ |
| .7 | 1.0535E+01 | 1.6198E+01 | 3.3006E+01 | ∞ |
| .8 | 1.4223E+01 | 2.1953E+01 | 4.4866E+01 | ∞ |
| .9 | 1.9238E+01 | 2.9816E+01 | 6.1138E+01 | ∞ |
| 1.0 | 2.6040E+01 | 4.0538E+01 | 8.3419E+01 | ∞ |
| 1.1 | 3.5249E+01 | 5.5136E+01 | 1.1389E+02 | ∞ |
| 1.2 | 4.7708E+01 | 7.4995E+01 | 1.5553E+02 | ∞ |
| 1.3 | 6.4548E+01 | 1.0199E+02 | 2.1242E+02 | ∞ |
| 1.4 | 8.7299E+01 | 1.3869E+02 | 2.9012E+02 | ∞ |
| 1.5 | 1.1802E+02 | 1.8855E+02 | 3.9622E+02 | ∞ |
| 1.6 | 1.5949E+02 | 2.5627E+02 | 5.4109E+02 | ∞ |
| 1.7 | 2.1546E+02 | 3.4824E+02 | 7.3887E+02 | ∞ |
| 1.8 | 2.9096E+02 | 4.7312E+02 | 1.0088E+03 | ∞ |
| 1.9 | 3.9279E+02 | 6.4263E+02 | 1.3773E+03 | ∞ |
| 2.0 | 5.3008E+02 | 8.7269E+02 | 1.8802E+03 | ∞ |
| 2.1 | 7.1515E+02 | 1.1848E+03 | 2.5666E+03 | ∞ |
| 2.2 | 9.6455E+02 | 1.6084E+03 | 3.5033E+03 | ∞ |
| 2.3 | 1.3005E+03 | 2.1830E+03 | 4.7814E+03 | ∞ |
| 2.4 | 1.7532E+03 | 2.9624E+03 | 6.5253E+03 | ∞ |
| 2.5 | 2.3628E+03 | 4.0194E+03 | 8.9045E+03 | ∞ |
| 2.6 | 3.1836E+03 | 5.4527E+03 | 1.2150E+04 | ∞ |
| 2.7 | 4.2886E+03 | 7.3959E+03 | 1.6578E+04 | ∞ |
| 2.8 | 5.7760E+03 | 1.0030E+04 | 2.2618E+04 | ∞ |
| 2.9 | 7.7776E+03 | 1.3600E+04 | 3.0857E+04 | ∞ |
| 3.0 | 1.0470E+04 | 1.8440E+04 | 4.2095E+04 | ∞ |
| 3.1 | 1.4094E+04 | 2.4998E+04 | 5.7421E+04 | ∞ |
| 3.2 | 1.8967E+04 | 3.3884E+04 | 7.8323E+04 | ∞ |
| 3.3 | 2.5522E+04 | 4.5923E+04 | 1.0682E+05 | ∞ |
| 3.4 | 3.4336E+04 | 6.2233E+04 | 1.4569E+05 | ∞ |
| 3.5 | 4.6187E+04 | 8.4327E+04 | 1.9869E+05 | ∞ |
| 3.6 | 6.2119E+04 | 1.1425E+05 | 2.7096E+05 | ∞ |
| 3.7 | 8.3534E+04 | 1.5477E+05 | 3.6949E+05 | ∞ |
| 3.8 | 1.1231E+05 | 2.0965E+05 | 5.0382E+05 | ∞ |
| 3.9 | 1.5099E+05 | 2.8397E+05 | 6.8696E+05 | ∞ |
| 4.0 | 2.0296E+05 | 3.8458E+05 | 9.3662E+05 | ∞ |
| 4.1 | 2.7279E+05 | 5.2080E+05 | 1.2769E+06 | ∞ |
| 4.2 | 3.6659E+05 | 7.0520E+05 | 1.7408E+06 | ∞ |
| 4.3 | 4.9259E+05 | 9.5481E+05 | 2.3732E+06 | ∞ |
| 4.4 | 6.6182E+05 | 1.2926E+06 | 3.2351E+06 | ∞ |
| 4.5 | 8.8909E+05 | 1.7499E+06 | 4.4099E+06 | ∞ |
| 4.6 | 1.1942E+06 | 2.3687E+06 | 6.0110E+06 | ∞ |
| 4.7 | 1.6040E+06 | 3.2061E+06 | 8.1930E+06 | ∞ |
| 4.8 | 2.1542E+06 | 4.3392E+06 | 1.1166E+07 | ∞ |
| 4.9 | 2.8927E+06 | 5.8723E+06 | 1.5219E+07 | ∞ |
| 5.0 | 3.8842E+06 | 7.9465E+06 | 2.0741E+07 | ∞ |

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